ISSN 2615-3726 (Online)
ISSN 2621-5667 (Print)

Asian Institute of Research

Journal of Economics and Business

Vol. 2, No.2 June 2019

Asian Institute of Research
Connecting Scholars Worldwide

Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2 June 2019

Journal of Economics and Business
ISSN 2615-3726 (Online)
ISSN 2621-5667 (Print)

Table of Contents

Journal of Economics and Business
ISSN 2615-3726 (Online)
ISSN 2621-5667 (Print)

Journal of Economics and Business
ISSN 2615-3726 (Online)
ISSN 2621-5667 (Print)

Journal of Economics and Business
ISSN 2615-3726 (Online)
ISSN 2621-5667 (Print)

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 205-217
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.80

Board Attributes and Corporate Performance: Evidence from Nonfinancial Firms in Nigeria

N.A. Emeka-Nwokeji[1], S. N. Agubata[2]

[1] Accountancy Department, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria. Email: nk.emekanwokeji@coou.edu.ng
[2] Accountancy Department, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria. Email: sn.agubata@coou.edu.ng

Abstract
Corporate board is pressured from all stakeholders for better reporting on corporate health. Meanwhile, effective discharge of the responsibilities of a corporate board is assured by an appropriate balance of skills and diversity without compromising competence, independence, and integrity. This study examines the extent to which corporate board attributes drive the performance of non-financial firms in Nigeria. The study adopted ex post facto research design. Data were extracted through content analysis from the annual report of 93 out of 122 non-financial firms listed on the Nigerian Stock Exchange from 2006 to 2015. Collected data were analysed with pooled ordinary least square regression conducting diagnostic tests to confirm the assumptions of the regression. Analysis revealed that: Board size and board gender diversity have a positive and significant effect on corporate performance. While board independence and board remuneration have a negative and significant effect on corporate performance. Also, directors' shareholding has a negative but insignificant effect on corporate performance. Based on the findings, the study among other things recommends that companies in Nigeria should promote diversity in its membership across a variety of attributes particularly gender diversity considering that it is relevant for enhancing firm performance. Also, Company should remunerate fairly, responsibly and transparently so as to reduce the decreasing effect of board remuneration and promote positive outcomes in the short, medium and long term.

Keywords: Board Attributes, Corporate Performance, Agency Theory, Gender Diversity, Sustainability

1. **Introduction**

The positive and negative consequences of the separation of ownership and control in modern public companies have rendered the concept of corporate governance in general and corporate board very critical. Incessant corporate scandals across the world have resulted in increased attention on the role which board of directors has to play towards the improvement of financial reporting disclosures for the purpose of reforming the global economy and rebuilding public trust and confidence to business reported information. Succinctly put there has been increased awareness in the business environment and the general public on the need for sound corporate reporting and governance system (Hawkamah, 2014). Thus, the board of directors and managers find themselves in a vastly more complex environment, increasingly accountable to and influenced by multiple stakeholders and pressured from all sides for better reporting on corporate health and behaviours (Thiagarajan & Baul, 2014).

Corporate governance is the way in which companies are managed and controlled. In particular, it focuses on the role of the company's board of directors and their responsibilities to shareholders and other stakeholders. Considering a number of corporate scandals and that basic legal requirement have proved inadequate for protecting shareholders interest, more specific regulations have been introduced to institutionalize best practices that will enhance the integrity of the business environment and thus facilitate trade and investment. The most current effort from Nigeria environment being the issue of Nigeria Code of Corporate Governance 2018 by Financial Reporting Council of Nigeria (FRCN) hereafter referred to as the Code. Companies now adopt "apply and explain" approach which requires firms to explain how specific principles have been applied. It is believed that the quality of corporate governance adopted and the nature of a company's culture and behaviors are having a significant impact on performance and long term sustainability of firms (Roy, 2016; Cleverly, Phillips, & Tilley, 2010). No wonder the Code emphasised that companies with the effective board and competent management that act with integrity are better placed to achieve their goals and contribute positively to society.

Board of directors' play a central role in the management of companies and establishing the culture, values, and ethics of the company. Their roles are usually categorized into monitoring, and supervisory roles all geared towards aligning the interest of the board, the management with the interest of the shareholders and other interest groups to ensure that firms succeed not only in the present but also in the future. Thus board of directors' attributes as a sustainability issue that hinges on enforcement and monitoring is receiving and will continue to receive considerable attention in the literature. It has attracted a great deal of research and attention from regulators, interest groups and academics as can be seen from the considerable growth in the empirical literature across accounting, economics, finance, and management literature from both local and international context.

Despite the considerable growth in research on the broad concept of corporate governance, there is limited evidence from the Nigerian context on board of directors’ attributes and their effect on performance using data of firms in all sectors other than financial sectors with special consideration on board shareholding and board gender diversity which are important monitoring attributes. Most prior studies focused on just financial sectors with little consideration on these monitoring attributes of the board (Akinyomi & Olutoye, 2015; Obeten & Ocheni, 2014; Danoshana & Ravivathani, 2013). Meanwhile, these attributes are essential for the effective discharge of the responsibilities of the board. Recall that the Code of 2018 emphasised that the board should promote diversity in its membership across a variety of attributes relevant for promoting better decision making and effective governance. Specifically, there should be an established measurable objective for achieving diversity both in gender and other areas. Kren and Kerr, (1997) also suggested that improvements in board monitoring will arise from more independent boards, diversity in board and from increased stock ownership by directors. Hence need to empirically analyse if these attributes taken together will affect corporate performance.

This study, therefore, evaluates the extent to which single indicators of corporate governance (specifically board attributes) disclosed in the annual report affect the accounting-based performance measures of firms in ten (10) sectors of the economy. The sectors are Agriculture, Conglomerate, Construction & Real Estate, Consumer, Healthcare ICT, Industrial, Oil & Gas, Resources and Services Sectors. These sectors were chosen because they contribute immensely to sustainable development in Nigeria. The study is an attempt towards extending the literature on corporate board to relatively unexplored but important sectors in Nigeria economy and using together board attributes which extant research in Nigeria have overlooked. Specifically, the paper examines whether board size, board independence, board gender diversity, directors' shareholding, and board remuneration drive accounting based performance measured with Return on Assets.

As a mechanism to make company's strategies, actions and achievements more transparent, efficient corporate governance framework and board of directors will help in mitigating reoccurrence of global financial crises (Usman & Amran, 2015).

2. Review of Related Literature

2.1 Conceptual and Theoretical Framework

Corporate governance has to do with ensuring that putting structures, processes, and mechanism is established so that firms are directed and managed in such a way that enhances long term shareholder value. By definition, corporate governance is a system or an arrangement that comprises of a wide range of practices and institutions (legal, economic and social) that protect the interest of corporation's owners (Ofurum and Torbira 2011). There are several well documented guidelines used in regulating firm in different parts of the world. For instance, the Sarbanes-Oxley Act (SOX) 2002 in the USA; The UK Corporate Governance Code 2016 issued by Financial Reporting Council Limited; Nigeria code of corporate governance 2018 issued by Financial Reporting Council of Nigeria. The 2018 Code is an attempt towards harmonizing various codes that existed. For the purpose of this study, the governance is measured using board size, board independence, board gender diversity, directors' shareholding, and directors' remuneration.

A board of directors is a panel of people who are elected to represent shareholders. Every public company is legally required to have a board of directors. They are the governing body of a Company. Board of directors of a company is an important organ not only responsible for the management of a firm but also for adopting good corporate governance practices. Firms with an effective board and competent management that act with integrity are better placed to achieve the goal of the business and contribute to the economy as the interest of the board and management are made to align with the interest of the shareholders and other stakeholders. For the board of directors to discharge their responsibilities effectively, there is a need for appropriate balance of skills and diversity without compromising competence, independence, and integrity. These are what is referred to as attributes which represent an important part of research on the relationship between the boards and the company performance.

The concept of performance is important in evaluating the achievement of goals; it shows the extent that resources of the firm are used efficiently to achieve their goals. Scholars often agree that performance is a function of time and organizational context and as such posit that there is no universal definition of the concept (Emeka-Nwokeji, 2018; Ekwueme, Egbunike, & Onyali, 2013). Haryono & Iskandar (2015) opined that Corporate Financial Performance is a reflection of the financial condition of a company analyzed by the financial tools. Performance of firms is of extreme importance to shareholders in particular as it helps to maintain a going concern and also increase the value of the business thus study of variables that influence performance is of great relevance both to practice and the academic world (Muller, 2014). This study measures the link between corporate board attributes and corporate performance from accounting based perspective using Return on Assets. Return on assets (ROA) is an accounting-based performance measure which measures profitability and the effectiveness of companies in utilising their assets to generate profit. Usman & Amran (2015), explained that ROA represents a company's profitability accruing from the total asset that the business controls. Commenting on the justification for using ROA, Inoue & Lee (2011), opined that ROA is an accounting-based measure that represents a firm's efficiency of using its assets during a given fiscal year, capturing short-term profitability of the firm. Return on Assets is computed as Net Profit After Tax/ Total Assets.

The theory that provided important theoretical frameworks for corporate governance (board attributes) research and is used to explain the motivation for this study is agency theory. Agency theory provides a number of ways to address the problems raised by the separation of ownership and control in public limited liability companies. The underlying assumptions and their relationship with this study are that effective and independent board is critical to a firm's ability to reduce information asymmetry between agent and principal, the resultant agency cost (litigation cost), while simultaneously improving overall performance.

2.2 Empirical Review

Corporate governance and corporate performance

Board of directors performs monitoring and advisory role in companies and is an important corporate governance mechanism. Corporate governance and board attributes have received substantial interest from academic researchers. Extant literature is either on corporate governance or board attributes using various corporate mechanisms like board structure, board composition, audit credibility, board committee, etc. The findings of some of the extant literature are discussed in this empirical review. Uwuigbe, Peter, & Oyeniyi (2014) investigate the effect of corporate governance mechanisms on earnings management of listed firms in Nigeria. Their result shows that board size and independence had a significant negative impact on earnings management, but CEO duality has a significant positive relationship with earnings management. Similarly, Duke, Kankpang, & Okonkwo (2012), document that corporate governance code, board size, internal audit, separation of board chair from CEO and the number of non-executive directors were positively associated with organizational efficiency. Naveen and Singh, (2012) found that while the proportion of grey directors on board has marginally deteriorated effect, the independent director's proportion has an insignificant positive effect on firm value. A study by Offurm (2011) revealed a positive and significant relationship between the return on equity (ROE) and corporate governance. Payne, Benson, & Finegold (2009) using a combined survey and archival sources discovered that board effectiveness is significantly related to corporate financial performance. Ahmed Sheikh, Wang, and Khan (2013) evaluated the relationship between internal governance mechanisms and performance measures using return on assets, return on equity, earnings per share, and market-to-book ratio. Their analyses show that board size is positively related to performance measures, whereas outside directors and managerial ownership are negatively related to the return on assets, earnings per share, and market-to-book ratio. Amar, Boujenoui and Francoeur, (2011) find that the levels of CEO and director ownership, as well as the level of board independence, were positively associated with the short-term financial performance of the acquirer, but board size was negatively related to value creation.

Board Size and corporate performance

Board size refers to the total number of directors on a firm's board. Bukair and Abdul Rahman (2015). Discovered that both the size and composition of the board have a negative effect on bank performance. Topak (2011) examines the relationship between the board size and the financial performance of an emerging market using Turkish firms to find that there is no relation between the board size and firm performance. Jackling and Johl, (2009) discovered that larger board size has a positive impact on performance thus supporting the view that greater exposure to the external environment improves access to various resources and thus positively impacts on performance. Belkhir (2009) provides evidence in favor of a positive relationship between board size and performance, as measured by Tobin's *Q* and the return on assets. Guest (2009) examine the impact of board size on firm performance large UK listed firms and find that board size has a strong negative impact on profitability, Tobin's Q and share returns. Similarly, Bennedsen, Kongsted, and Nielsen (2008) provide evidence of a small adverse board size effect driven by the minority of small and medium-sized firms that are characterized by having comparatively large boards of six or more members. On whether board size really matters in terms of influencing firm's performance, Garg (2007) find that there is an inverse association between board size and firm performance. Earlier on the link between board size and corporate performance, Eisenberg, Sundgren, and Wells (1998) find a significant negative correlation between board size and profitability in a sample of small and midsize Finnish firms.

Board Independence and corporate performance

Board of directors exercises oversight and control to ensure that management act in the best interest of shareholders and other stakeholders. The board requires the combination of executive and non-executive directors to achieve this. The non-executive directors on the board will not be able to exercise their duties effectively unless they are independent of management (Fuzi, Halim & Julizaerma 2016). Rashid (2018) used accounting and market performance measures in analyzing the effect of board independence on performance and finds that board independence and firm economic performance do not positively influence each other. Uribe-Bohorquez, Martínez-Ferrero, and García-Sánchez (2018) use technical evidence to measure corporate performance and provide evidence that board independence increases the firm's technical efficiency. Liu, Miletkov, Wei, and Yang (2015) find that independent directors have an overall positive effect on firm operating performance in China. On the other hand, Lu and Wang (2015) find that firms with a higher degree of board independence is negatively associated with capital investments but positively associated with R&D investments. Similarly, Arioglu (2015) investigated the market reaction to appointments and departures of independent directors to boards and discovered that investors do not value the existence of independent directors on boards or committees of boards.

Gender diversity and corporate performance

Having women on boards has become a high profile issue in recent years. Traditionally women were underrepresented in the company's board. With an increase in the presence of women in recent years, researchers have been examining the relationship between their presence in the board and corporate performance. Results indicate that female directors on the remuneration committee contribute to a moderation of executive remuneration growth and are consequently perceived by shareholders as valuable resources (Garcia-Izquierdo, Fernández-

Méndez & Arrondo-García, 2018). On the issue of the presence of women, Boulouta (2013) did research on with the role of women on boards and especially their impact on corporate social performance. The study reveals that board gender diversity significantly affects corporate social performance. Mallin and Michelon, (2011) in their study on the relationship between board reputation and corporate social performance provided empirical evidence that the proportions of independent, community influential and female directors are positively associated with corporate social performance. They also discovered that CEO duality and community influential directors with multiple directorships have a negative effect on corporate social performance. Campbell and Vera (2010) noted that the stock market reacts positively in the short term to the announcement of female board appointments, suggesting that investors on average believe that female directors add value. This was confirmed the results of their study which show that female board appointments are positively associated with a firm value over a sustained period. Study by Rose (2007), does not find any significant link between firm performance as measured by Tobin's Q and female board representation Earlier on a study about woman on board, Smith, Smith and Verner (2006) noted that woman directors may better understand particular market condition which brings more creativity and quality to board decision making. Also having women on board may generate a better public image of the firm and improve firm performance. The results of their analysis show that the proportion of women in top management jobs have positive effects on firm performance, even after controlling for numerous characteristics of the firm and direction of causality. However, Gallego-Álvarez, García-Sánchez, and Rodríguez-Dominguez (2010) noted that gender diversity might not influence corporate performance. On their work on the effect of gender diversity on corporate performance, they find that companies with higher levels of gender diversity do not obviously outperform other companies with lower levels, in terms of several markets and accounting measures. In line with this finding, Jhunjhunwala and Mishra (2012) find that diversity in teams often leads to conflicts, adversely affecting performance unless properly managed. Their analysis shows that there is no link between board heterogeneity and financial performance in Indian firms.

Directors' shareholding and corporate performance

Directors' shareholding is a situation where the director holds shares in a company that he/she directs. It means being a shareholder and a director at the same time. It is a way of making directed have a vested interest in addition to working as a director. A study by Zondi and Sibanda (2015) do not support the agency theory that aligning the interests of managers and shareholders will improve firm performance, and their study reveals a negative relationship between managerial ownership and firm performance. Chen, Hou, and Lee (2012) find that insider managerial ownership has a significantly positive impact on the performance of firms. Florackis, Kostakis, and Ozkan (2009) provide evidence of initial alignment effect of managerial ownership with a corporate performance at levels lower while they do not lead to a strong inference on the relationship between managerial ownership and corporate performance for intermediate and high levels of managerial ownership. A study by Li, Moshirian, Nguyen, and Tan (2007) indicate that managerial ownership has a positive effect on firm performance. Hu and Zhou, (2008) find that firms of significant managerial ownership outperform firms whose managers do not own equity shares. Chen, Guo, and Mande (2003) find that *corporate performance* increases monotonically with managerial ownership. This indicates that as ownership increases, there is greater alignment of managerial interests with those of stockholders. Short and Keasey (1999) consider different measures of firm performance in analyzing managerial ownership and performance of firms and discover a non-linear relationship between firm performance and managerial ownership. Similarly, Farrer and Ramsay (1998) discover that, in some circumstances, such a relationship does exist, but the results differ according to a number of factors such as the performance measure used.

Directors Remuneration and corporate performance

Kerr and Bettis, (1987) noted that boards of directors should reward executives on the basis of financial returns to shareholders. They posit that studies of this issue have been inconclusive. In a most recent study, Raithatha and Komera (2016) investigate the relationship between executive compensation and firm performance and find that firm performance measured by accounting, as well as market-based measures, significantly affects executive compensation. Ozkan (2011) examines the link between CEO pay of UK non-financial firm and discover that an increase in shareholder return corresponds to an increase in cash compensation. Nahar (2006) investigate the extent to which a firm's performance is being influenced by directors' remuneration. The result shows that directors' remuneration is not associated with a firm's profitability, as measured by ROA. A negative and significant association is observed between directors' remuneration and lagged ROA. Contrary to this Muller (2014) find a significant relationship between non-executive directors' basic fee, fees paid in shares and additional remuneration for board committee membership and financial performance of firms. Ghosh (2006) find larger boards have a dampening influence on firm performance both in terms of either accounting or market-based measures of performance. The analysis also show that compensation of the CEO has a significant effect on the performance of the firm. Kato and Long (2006) find a statistically significant association of annual cash compensation (salary and bonus) for top executives with respect to shareholder's value. In addition, they discovered that sales growth is significantly linked to executive compensation.

From extant literature, conclusive evidence on the relationship between corporate governance mechanism and firm performance lacks as previous investigations have not produced a consistent result. While some researchers report a positive relationship between governance and firm performance; others report a negative relationship and yet others no relationship. Attempting to draw general conclusions from the literature is not possible and hence need for further study. Based on the previous finding, it is reasonable to test the following assertions stated in their null form:

1. Board size has no significant effect on corporate performance;
2. Board independence has no significant effect on corporate performance;
3. Board gender diversity has no significant effect on corporate performance;
4. Directors' shareholding has no significant effect on corporate performance;
5. Board remuneration has no significant effect on corporate performance;

3. Methodology

This study adopted *ex post facto* research design, and the population consists of all quoted non-financial companies on the Nigerian Stock Exchange. The sectors described as non-financials are Agriculture, Conglomerate, Construction & Real Estate, Consumer, Healthcare ICT, Industrial, Oil & Gas, Resources and Services Sectors. 93 out of 122 firms listed under the sectors were selected from 2006 to 2015 based on those firms that have complete data on the variables. The existing data of board attributes (explanatory variables) were extracted from the annual reports of the selected companies through content analysis. On the other hand, data for corporate performance (dependent variables) and control variables were gathered from MachameRATIOS, a database maintained by TalkData Associates (www.machameRATIOS.com). 93 out of 122 non-financial firms listed on the Nigerian Stock Exchange from 2006 to 2015 that have complete data on the variables. The data were analysed using pooled ordinary least regression with the aid of STATA software. Before analyzing the pooled data, some preliminary statistics such as descriptive statistics, normality, correlation and two post-regression diagnostic tests (multicollinearity and heteroscedasticity) were also conducted to confirm assumptions of regression. To test the hypotheses of this study, the following model stated in its functional and econometric form was used. FinPerf = F (BSIZE, BOIND, BOGD, DHOLD, DCOST, Controls

$$ROA_{it} = {}_0 + {}_1BSIZE_{it} + {}_2BOIND_{it} + {}_3BOGD_{it} + {}_4DHOLD_{it} + {}_5DCOST_{it} + {}_6FSIZE_{it} + {}_7FAGE_{it} + {}_8TLBTA_{it} + {}_{it}$$

Where:

ROA = Corporate performance which is measured as Net Profit After Tax/ Total Assets
β_0 = Intercept estimates
β_{1-8} = Coefficient of the independent variables
e = error term

Specifically, the independent variables are measured as Board size (BSIZE) measured as a number of board members, Board independence (BODIND) is the proportion of non-executive directors to total directors. Board gender diversity (BOGD) is the proportion of female to a number of directors. Directors' shareholding (DHOLD) is measured as Directors Shares divided by outstanding shares. Board Remuneration (DCOST) is measured as Directors Cost divided by Total Assets. Control Variables are: Firm Size (FSIZE), is measured as a Log of total assets. Firm Age (FAGE) is measured as Number of years a company is listed on the Nigerian Stock Exchange. Leverage (TLBTA) is measured as Total Liabilities divided by total assets.

4. Empirical Analysis and Discussion of Findings

Descriptive statistics on Table 1 in the Appendix provides information regarding the mean (average), maximum, minimum, standard deviation, and median for each of the specific Board attributes used. For instance, the descriptive statistics show that the largest board in the sample during the period under review had seventeen (17) members, while on the average most of the companies had a board size of nine members. The variable of board independence reveals that 64% of the sampled firms had more independent directors than dependent directors in their board. The statistics show that the ratio of female to male directors on the board is 7%. The statistics also show that some companies do not have any female representation in its board among other findings. From the Normality Test in Table 2 of Appendix, all the variables of interest are normally distributed and satisfy the test of significance at 1% level of significance except for the variables of firm size, which did not pass even at 10%. However, this situation may be overlooked since it is a control variable. Overall, the statistics revealed that there is no sample selection bias or outlier in the data that would impair the generalization from this study. Table 3 in the Appendix is the correlation matrix table which shows the relationship that exists between the variables used for the study. Table 5 and 6 from the appendix shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. Here the mean VIF value of 1.39 which is less than the benchmark value of 10 indicates the absence of multicollinearity. Breusch-Pagan/Cook-Weisberg test for heteroscedasticity with a probability value of 0.40 resulting from the test is statistically insignificant which implies that the data are free from the presence of unequal

Table 4.1: **Accounting Performance and Corporate Governance Sustainability Regression Model**

Independent Variables	Coef.	t-Stat	P>/t/
bsize	0.120	0.45	0.053*
boind	-4.931	-1.40	0.003***
bogd	16.444	2.48	0.013***
dhold	-0.044	-1.55	0.122
dcost	-0.163	-6.61	0.000***
fsize	0.632	0.69	0.493
fage	0.015	0.32	0.746
tlbta	-0.034	-5.88	0.000***
F – Stat	30.42		0.000***
R-squared	**0.460**		
Adjusted R-squared	**0.452**		

Source: Extract from STATA Output
Where *, *, implies statistical significance at 05% and 1% levels respectively**

Based on the result from the table 4.1 above, the specific finding from the explanatory variables and each control variable from the regression model is provided as follows: It was observed that the regression results show that the R-squared and adjusted R-squared values were (0.46) and (0.45). This suggests that all the explanatory variables jointly explain about 45% of the systematic variations in the performance of return on total assets across the quoted sample in this study and over the period under consideration. This means that regression models that include corporate board attributes of board size, board independence, board gender diversity, directors' shareholding, directors' remuneration, and control variables of firm size, firm age, and leverage, may not be completely appropriate in explaining the behavior of accounting performance variable of return on total assets. Other variables outside the explanatory variables used in this study need to be included in the social sustainability model. The F-statistics (30.42) and its p-value (0.00) (see complete regression table 4 at appendix) show that the accounting regression model is generally significant at 1% levels and its coefficients may be adopted for policy purposes. Specific findings are discussed below:

From table 4.1, the variable of board size (bsize) with a coefficient of = 0.120 impacts positively on accounting performance and it is statistically significant at 5% level (P-value 0.053) during the period of study. This result reveals that expanding an eight-person board by one member implies an addition in profitability of about 0.120. This change is economically significant. This result, therefore, suggests that we should reject the null hypothesis which states that the size of the board does not significantly affect the financial performance of listed companies in Nigeria. This justifies the argument that larger boards are positive and significantly related to higher corporate performance. Also, that larger board will be more effective in monitoring financial reporting, because the company might be able to appoint directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences. Additionally, previous researchers posit that executives may start to prioritize the firm's interests rather than their own along with the increase in the board size. This finding contradicts the findings of Guest (2009), Bennedsen et al. (2008), Garg (2007) Eisenberg et al. (1998) Narwal & Jindal (2015) that fine negative association between board size and profitability. But uphold the findings of Belkir (2009) that provides. Uribe-Bohorquez evidence in favor of a positive relationship between board size and performance. The alternative hypothesis that board size has a significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria is accepted.

On the other hand, the variable of Board Independence (boind) have a negative and statistically significant effect on accounting performance of return on total assets. The coefficient of -4.931 and P-value of 0.003 confirm this. One possible reason for this result is that outside directors appointed to the board may lack specific knowledge regarding the operations of the companies into which they direct specifically in Nigeria. The outcome as obtained here however negates the findings of Uribe-Bohorquez et al (2018) and Liu et al (2015) that show that independent directors have an overall positive effect on firm operating performance, but correspond with the assertion of Fuzi et al (2016) andArioglu (2015) that investors do not value the existence of independent directors on boards or committees of boards. Thus greater board independence did not indeed increase the likelihood of firm improving performance. Hence the alternative hypothesis that board independence has a significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria is accepted.

Furthermore, corporate board attribute of Board Gender Diversity (bodg) reveals a positive effect on return on total assets of the firm (16.444). The relationship is significant as its probability value is lesser than 5% benchmark adopted in this study. (P-value = 0.013). This result suggests that as listed companies in Nigeria continue to engage more female on the board, there will be meaningful improvements in terms of firm accounting performance. This result may equally suggest that the market will punish firms that did not give female a chance to participate on boards since board gender diversity was found to have a significant effect on performance. These findings may have arisen because the majority of the sampled companies have significant numbers of women directors on the board thereby influencing the strategies of the firms. Prior research finds that female executives are more risk averse (Faccio, Marchica, & Mura, 2016). This characteristic can cause their monitoring and advising to focus on reducing the possibility of extremely negative outcomes, which reduces the likelihood of the firm being subject to poor future corporate performance. Hence the alternative hypothesis of a significant relationship between board gender diversity and firm financial performance in Nigeria is accepted. This result supports the findings of Boulouta (2013), Campbell and Vera (2010) and Smith et al. (2006) that having women on board may generate a better public image of the firm and improve firm performance. However, it contradicts the finding Gallego-Álvarez et al. (2010) and Jhunjhunwala and Mishra (2012) that diversity in teams often leads to conflicts, adversely affecting performance. Thus the alternative hypothesis that board gender diversity has a significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria is accepted.

Another result to note in this study is the variable: Directors Shareholding *(dhold = -0.044)* which have a negative influence on market performance but statistically insignificant even at 10%. The t-value is -1.55 while its P-value is 0.122. This contravenes the argument that directors' shareholding aligns the interests of managers and shareholders and thus enhances performance (Zhou 2001). This result is in line with the finding of Akinyomi & Olutoye (2015), Zondi and Sibanda (2015) and Short and Keasey (1999) that aligning the interests of managers and shareholders will improve firm performance, but disagree with prior empirical results of Chen et al (2012) and Li et al (2007) that insider managerial ownership have a significantly positive impact on the performance of firms. From the finding of this study, the null hypothesis concerning *Directors Shareholding* provides a satisfactory basis for explaining the accounting performance of Nigerian listed companies. Thus the alternative hypothesis of a significant relationship between director shareholding and accounting performance variable of return on total firm assets is rejected.

Board Remuneration *(dcost = -0.163)* have a negative influence on firm financial performance and is statistically significant. The P-value and coefficient of 0.000 and -0.163 confirms that. This indicates that an increase in director's remuneration will reduce the return on assets by 16%. This result contradicts the findings of Raithatha and Komera (2016), *Muller (2014)* and Ozkan (2011) that directors remuneration has a significant positive impact on profitability, but support the work of Nahar (2006) This result did not support the null hypothesis which states that directors' remuneration has no significant effect on firm financial performance in Nigeria. Thus the alternative hypothesis is accepted.

Furthermore, for the control variable of Firm Size (fsize) the results discover a positive relationship with firm accounting performance of return on assets. (Coeff.0.632). However, the relationship is not significant as its P-value is greater than 5% benchmark adopted in this study. (P-value = 0.493). Firm Age (fage) showed a positive (0.015) and statistically insignificant (P-value = 0.746) effect on firm financial performance measured by return on total assets. This implies that as a firm grows in its listing age, financial performance rate of return on total assets improves but at an insignificant rate. This result is consistent with the postulation that older firms can acquire experience based economies and mitigate the liabilities of newness. However, less concern should be given to this position as it appears to be insignificantly related to the dependent variable of return on assets. With respect to the variable of Leverage (tlbta = -0.034), its effect on financial performance among listed companies in Nigeria is negative, and the influence is statistically significant at 1%. The P-value of 0.000 confirms that. From this analysis, it can be seen that an increase in financial leverage decreases firm financial performance among listed companies in Nigeria during the period under consideration. Findings from the above analysis can be summarized as:

1. Board size has a positive and significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria.
2. Board independence has a negative and significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria is accepted.
3. Board gender diversity has a positive and significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria.
4. Directors' shareholding has a negative but insignificant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria.
5. Board remuneration has a negative and significant effect on accounting performance variable of return on total firm assets among listed firms in Nigeria.

5. Conclusion and Recommendation

With the good corporate board in place managers are sure to act in the best interest of all stakeholders, and this will enhance the company's bottom line. Evidence from this study indicates that financial rewards of implementing effective corporate governance mechanism outweigh the costs involved in the long run. Larger board size with their effective monitory, expertise, and skills lead to greater corporate performance. Engaging female on the board improves corporate performance. However, having a greater number of outside directors appointed to the board, directors having an ownership interest and the mode of compensating the directors have value decreasing effect on the performance of firms in Nigeria. Based on the findings the paper recommended that companies in Nigeria should promote diversity in its membership across a variety of attributes particularly gender diversity considering that it is relevant for enhancing firm performance. Considering that larger board is more effective in monitoring financial reporting since it offers company opportunity of appointing directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences, the study recommends that there should be sufficient size to enable the board to undertake the activities required of them. There should be a periodic review of corporate board attributes particularly those that have a significant effect on corporate performance to ensure that the attributes continue to contribute to improvement in firm performance. The Board should ensure that the company remunerates fairly, responsibly and transparently so as to reduce the decreasing effect of board remuneration and promote positive outcomes in the short, medium and long term. There should be comprehensive disclosure of all corporate board attributes adopted by firms. There should be an appropriate mix of Executive, Non-Executive and Independent Non-Executive members so that the negative effect of board independence can be reduced.

References

Ahmed Sheikh, N., Wang, Z., & Khan, S. (2013). The impact of internal attributes of corporate Governance on firm performance: evidence from Pakistan. *International Journal of Commerce and Management*, *23*(1), 38-55.

Akinyomi, O. J., & Olutoye, E. A. (2015). Corporate Governance and Profitability of Nigerian Banks. *Asian Journal of Finance & Accounting, 7*(1), 172-182.

Amar, W. B., Boujenoui, A., & Francoeur, C. (2011). CEO attributes, board composition, and acquirer value creation: A canadian study. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *28*(4), 480-492.

Arioglu, E. (2015). Market reaction to director independence at Borsa Istanbul. *Borsa Istanbul Review*, *15*(4), 259-271.

Belkhir, M. (2009). Board of directors' size and performance in the banking industry. *International Journal of Managerial Finance*, *5*(2), 201-221.

Bennedsen, M., Kongsted, H. C., & Nielsen, K. M. (2008). The causal effect of board size in the performance of small and medium-sized firms. *Journal of Banking & Finance*, *32*(6), 1098-1109.

Emeka-Nwokeji, N. A. & Okeke, P. C. (2019) Evaluating Corporate Environmental Disclosures and Performance of Quoted Non-Financial Firms in Nigeria. *Journal of accounting, business, and social sciences*, 1(2), 119-132.

Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193-209.

Farrer, J., & Ramsay, I. (1998). Director share ownership and corporate performance–evidence from Australia. *Corporate Governance: An International Review*, *6*(4), 233-248.

Florackis, C., Kostakis, A., & Ozkan, A. (2009). Managerial ownership and performance. *Journal of business research*, *62*(12), 1350-1357.

Fuzi, S. F. S., Halim, S. A. A., & Julizaerma, M. K. (2016). Board independence and firm performance. *Procedia Economics and Finance*, *37*, 460-465.

Gallego-Álvarez, I., García-Sánchez, I. M., & Rodríguez-Dominguez, L. (2010). The influence of gender diversity on corporate performance. *Revista de contabilidad*, *13*(1), 53-88.

Garcia-Izquierdo, A. L., Fernández-Méndez, C., & Arrondo-García, R. (2018). Gender diversity on boards of directors and remuneration committees: the influence on listed companies in Spain. *Frontiers in psychology*, *9*.

Garg, A. K. (2007). Influence of board size and independence on firm performance: A study of Indian companies. *Vikalpa*, *32*(3), 39-60.

Ghosh, S. (2006). Do board characteristics affect corporate performance? Firm-level evidence for India. *Applied Economics Letters*, *13*(7), 435-443.

Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, *15*(4), 385-404.

Halpern, P., Kieschnick, R., & Rotenberg, W. (2005). Managerial shareholdings, firm value, and acquired corporations. *The Quarterly Review of Economics and Finance*, *45*(4-5), 781-795.

Hawkamah and Ernst & Young. (2014). Environmental, social & corporate governance practices in the *MENA region 2007-2012. review of the S&P/Hawkamah pan arab esg index.* Retrieved 12 13, 2014, from http://hawkamah.org/wp-content/uploads/2014/10/ENVIRONMENTAL.SOCIAL.AND_.CORPORATE.GOVERNANCE.PRACTICES.IN_.THE_.MENA_.REGION.2007-2012.pdf

Hu, Y., & Zhou, X. (2008). The performance effect of managerial ownership: Evidence from China. *Journal of Banking & Finance*, *32*(10), 2099-2110.

Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, *17*(4), 492-509

Jhunjhunwala, S., & Mishra, R. K. (2012). Board diversity and corporate performance: The Indian evidence. *IUP Journal of Corporate Governance*, *11*(3), 71.

Kato, T., & Long, C. (2006). Executive compensation, firm performance, and corporate governance in China: Evidence from firms listed in the Shanghai and Shenzhen Stock Exchanges. *Economic development and Cultural Change*, *54*(4), 945-983.

Kerr, J., & Bettis, R. A. (1987). Boards of directors, top management compensation, and shareholder returns. *Academy of Management Journal*, *30*(4), 645-664.

Kren, L., & Kerr, J. L. (1997). The effects of outside directors and board shareholdings on the relation between chief executive compensation and firm performance. *Accounting and Business Research*, *27*(4), 297-309.

Li, D., Moshirian, F., Nguyen, P., & Tan, L. W. (2007). Managerial ownership and firm performance: Evidence from China's privatizations. *Research in International Business and Finance*, *21*(3), 396-413.

Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance*, *30*, 223-244.

Lu, J., & Wang, W. (2015). Board independence and corporate investments. *Review of Financial Economics*, *24*, 52-64.

Mallin, C. A., & Michelon, G. (2011). Board reputation attributes and corporate social performance: An empirical investigation of the US best corporate citizens. *Accounting and Business Research*, *41*(2), 119-144.

Müller, V. O. (2014). Do corporate board compensation characteristics influence the financial? performance of listed companies? *Procedia-Social and Behavioral Sciences*, *109*, 983-988.

Nahar Abdullah, S. (2006). Directors' remuneration, firm's performance and corporate governance in Malaysia among distressed companies. *Corporate Governance: The international journal of business in society*, *6*(2), 162-174.

Naveen, K., & Singh, J. P. (2012). Outside directors, corporate governance and firm performance: Empirical evidence from India. *Asian Journal of Finance & Accounting, 4*(2), 39-55.

Obeten, O. I., & Ocheni, S. (2014). Empirical study of the impact of corporate governance on the performance of financial institutions in Nigeria. *Journal of Good Governance and Sustainable Development in Africa, 2*(2), 57-73.

Ofurum, C. O., & Torbira, L. L. (2011). Corporate governance and firm performance in Nigeria. *IJEMR, 1*(4), 1-12.

Ozkan, N. (2011). CEO compensation and firm performance: An empirical investigation of UK panel data. *European Financial Management*, *17*(2), 260-285.

Payne, G. T., Benson, G. S., & Finegold, D. L. (2009). Corporate board attributes, team effectiveness, and financial performance. *Corporate boaJournal of Management Studies, 46*(4), 704-731.

Raithatha, M., & Komera, S. (2016). Executive compensation and firm performance: Evidence from Indian firms. *IIMB Management Review*, *28*(3), 160-169.

Rashid, A. (2018). Board independence and firm performance: Evidence from Bangladesh. *Future Business Journal*, *4*(1), 34-49.

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review, 15*(2), 404-413.

Roy, A. (2016). Corporate governance and firm performance: A study of Indian listed firms. *Metamorphosis, 15*(1), 31-46. doi:DOI: 10.1177/0972622516629032

Short, H., & Keasey, K. (1999). Managerial Ownership and the Performance of Firms: Evidence from the UK. *Journal of corporate finance*, *5*(1), 79-101.

Smith, N., Smith, V., & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2,500 Danish firms. *International Journal of Productivity and Performance management*, *55*(7), 569-593.

Thiagarajan, A., & Baul, U. (2014). Value reporting and integrated reporting in the era of intellectual capital (ic. *International Journal of Computational Engineering & Management, 17*(1), 42-56.

Topak, M. S. (2011). The effect of board size on firm performance: Evidence from Turkey. *Middle Eastern Finance and Economics*, *14*(1), 1450-2889.

Uribe-Bohorquez, M. V., Martínez-Ferrero, J., & García-Sánchez, I. M. (2018). Board independence and firm performance: The moderating effect of institutional context. *Journal of Business Research*, *88*, 28-43.

Usman, A. B., & Amran, N. A. (2015). Corporate social responsibility practice and corporate financial performance: evidence from Nigeria companies. *Social Responsibility Journal, 11*(4), 749 - 763. Retrieved from http://dx.doi.org/10.1108/SRJ-04-2014-0050

Zondi, S., & Sibanda, M. (2015). Managerial ownership and firm performance on selected jse listed firms. *Corporate Ownership & Control*,*12*(3), 233-241

Appendix

TABLE 1: DESCRIPTIVE STATISTICS (CORPORATE BOARD ATTRIBUTES)

stats	bsize	boind	bogd	dhold	dcost	GOVI
mean	8.866817	6423363	.0747856	16.50044	2.703342 .	-1.07e-09
p50	9	.67	. 08	3.72	. 2975	.19503
min	3	0	0	0	0	-7.989573
max	17	1.13	.4	123.58	495.342	2.80061
sd	2.431963	.164372	.0858043	23.1074	30.36445	1.27332
N	886	886	886	878	886	878

TABLE 2: NORMALITY TEST

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	------- joint ------ adj chi2(2)	Prob>chi2
retoa	885	0.0000	0.0000	.	0.0000
bsize	886	0.0000	0.8178	23.12	0.0000
boind	886	0.0000	0.0937	24.96	0.0000
bogd	886	0.0000	0.0053	.	0.0000
dhold	878	0.0000	0.0000	.	0.0000
dcost	886	0.0000	0.0000		0.0000
fsize	886	0.5810	0.1850	2.06	0.3565
fage	886	0.0000	0.0000	10.70	0.0000
tlbta	883	0.0000	0.0000	.	0.0000

TABLE 3: CORRELATION ANALYSIS

	retoa	bsize	boind	bogd	dhold	dcost	fsize	fge	tlbta
retoa	1.0000								
bsize	0.0984	1.0000							
boind	-0.0234	0.0521	1.0000						
bogd	0.1221	0.0029	0.0237	1.0000					
dhold	-0.2211	-0.0200	0.0857	0.0240	1.0000				
dcost	-0.4446	0.0089	0.0092	-0.0596	0.2477	1.0000			
fsize	0.1929	-0.0208	0.0314	0.0736	-0.3011	-0.1911	1.0000		
fage	0.0418	-0.1869	0.0253	-0.0042	-0.3084	-0.0333	0.0486	1.0000	
tlbta	-0.4426	-0.0954	-0.0463	-0.0911	0.3193	0.6674	-0.2455	0.0165	1.0000

TABLE 4: ACCOUNTING PERFORMANCE AND CORPORATE GOVERNANCE

Source	SS	df	MS
Model	83301.726	8	8330.1726
Residual	236357.503	863	273.878914
Total	319659.229	873	366.161775

Number of obs	=	874
F(8, 863)	=	30.42
Prob > F	=	0.0000
R-squared	=	0.4606
Adj R-squared	=	0.4520
Root MSE	=	16.549

retoa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.1209186	.2688257	0.45	0.653	-.4067101	.6485472
boind	-4.931931	3.530066	-1.40	0.163	-11.86045	1.996589
bogd	16.44486	6.634647	2.48	0.013	3.422931	29.46679
dhold	-.0441601	.0285656	-1.55	0.122	-.1002262	.0119061
dcost	-.1633447	.024722	-6.61	0.000	-.2118671	-.1148224
fsize	.6327748	.9218187	0.69	0.493	-1.176494	2.442044
fage	.0150508	.0463759	0.32	0.746	-.075972	.1060735
tlbta	-.034112	.005797	-5.88	0.000	-.0454899	-.0227341
_cons	-7.65862	6.614843	-1.16	0.247	-20.64168	5.324443

TABLE 5: TEST FOR MULTICOLINEARITY (VIF TEST)

Variable	VIF	1/VIF
tlbta	1.99	0.502403
dcost	1.82	0.549225
fsize	1.64	0.610949
dhold	1.39	0.719422
bsize	1.35	0.742295
fage	1.20	0.835506
boind	1.06	0.946021
bogd	1.03	0.972714
Mean VIF	1.39	

TABLE 6: TEST FOR HETEROSCEDATICITY

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of retoa

chi2(1) = 520.18

Prob > chi2 = 0.4000

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 230-236
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.82

Improving the Objective Well Being of Productive Zakat Recipients by Applying Islamic Micro Finance in Baitul Mal Aceh, Indonesia

Alamsyah Alwi[1], Mutiara Dwi Sari[2], Zahri Hamat[3], Caturida Meiwanto Doktoralina[4]

[1] Faculty of Economics and Management, University College Bestari, Bandar Permaisuri, 22100 Setiu, Terengganu, Malaysia
[2] Faculty of Social Sciences, University College Bestari, Bandar Permaisuri, 22100 Setiu, Terengganu, Malaysia
[3] Faculty of Economics & Business, Universitas Mercu Buana, 11650, Jakarta Barat, Jakarta, Indonesia

Corresponding Author: Mutiara Dwi Sari, Faculty of Social Sciences, University College Bestari, Bandar Permaisuri, 22100 Setiu, Terengganu, Malaysia. Tel: -. E-mail: mutiara_dwisari@yahoo.com

Abstract
This study was aimed to identify the level of objective wellbeing of the productive zakat recipients in Baitul Mal Aceh Indonesia. A descriptive quantitative approach using an average score to measure the level of objective wellbeing was carried out. A total of 498 productive zakat recipients were involved in this study. The findings showed that the average level of objective well-being of the productive zakat recipient for six dimensions (economic, house, health, educational, vehicle and time) is still moderate. Even for age groups ≥64; the barber and low educated respondents are still at a lower level of objective wellbeing. Therefore, Baitul Mal Aceh needs to increase the amount of microloans together with the provision of business expertise and management courses to enhance the efficiency of objective wellbeing of productive zakat recipients.

Keywords: Objective Wellbeing, Productive Zakat, Baitul Mal, Cross-Sectional Study, Aceh Indonesia

1. Introduction

Aceh is one of the Provinces in Sumatera, Indonesia which has the highest poverty severity index (0.87) compared to national poverty severity index (0.44) (BPS Indonesia, 2017). Before the earthquake and tsunami hit Aceh in 2004, the economic level in Aceh was lower when compared with other parts of Indonesia due to war. Cavallo and Noy (2009) pointed out that natural disasters and wars have a negative effect on the well-being of a nation's economy. Although Aceh has now received substantial financial allocations, the Aceh Government has yet to demonstrate its ability to solve poverty problems. Many government programs have not been able to address poverty and well-being issues in Aceh (Wahyudi et al., 2014). Whereas, Kataria (2011) believed that poverty is the root cause of many social problems around the world. Hence, poverty in Aceh requires a comprehensive approach to address overwhelming problems associated with poverty. Ganguly (2018), Nagayya and Rao (2009) and Sani et al. (2017) reported that microfinance is one of the effective ways of reducing poverty.

Unfortunately, most conventional microfinance agencies still practice usury which is certainly not an appropriate practice to be offered to the Muslim community (Hassan and Ali, 2010). In fact, Islam has provided a better tool that can be used to address poverty, i.e., zakat. Zarina et al. (2012) state zakat is an Islamic fiscal policy tool that serves as a catalyst for economic development towards a high-income nation. According to Abdullah (2013), productive zakat is the property of zakat used for supporting business capital of the zakat recipients. Previously, Armiadi (2008) explains that the distribution of productive zakat improves the economic well-being of the recipient. While Wahyuni (2017) argued that productive zakat is a zakat fund that is distributed to zakat recipients in an efficient and effective manner with a versatile and productive system in accordance with the ruling of shari'ah. In 2016, Baitul Mal Aceh has distributed productive zakat to micro-entrepreneurs who have small businesses (Riyaldi, 2015). The majority of zakat productive recipients have successfully repaid their loan to Baitul Mal Aceh (Nurlaila and Hasnita, 2013).

Howell and Collen (2008) explained that wellbeing could be achieved if an individual has income, wealth or savings to meet the basic human needs such as food, water, and shelter, etc. Food, water, shelter, sufficient income, and household assets are basic human needs that are essential for decent living (Wu, 2013). Sugiharto (2007) and Muda et al. (2006) mentioned that the level of income, spending's, savings, the health of family members, the convenience of getting health services, the cost of a child's education per month, the value of the vehicle, the free time, and the frequency of recreation per month can be used to measure the objective wellbeing. Meanwhile, White (2008) argued that the objective wellbeing could be measured by some of the economic variables, nutritional and health status. Furthermore, these indicators can also be used to measure the perception or individual satisfaction level of each of these objective welfare indicators. However physical, material and life-standard necessities are basic data in measuring prosperity.

In relation to objective wellbeing and productive zakat contribution, the question is; has the productive zakat been proven to increase the objective wellbeing of the recipients? Can the productive zakat help to repay their loan? Unfortunately, there are not many reports that explain the current level of the objective well-being of productive zakat recipients. Therefore, the purpose of this study was to analyse the level of overall objective well-being. Further, the effect of the demographic distribution of the zakat recipients on the level of objective well-being has also been analysed. The findings of this study are expected to be useful inputs to be used as a policy basis in improving the objective well-being of the recipients of zakat and the people of Aceh, Indonesia.

2. Methods

A Cross-sectional study was conducted in Aceh Province, Indonesia. Sample selection is done by using purposively sample selection method. Aceh was chosen as the location of the study because it is the only Province in Indonesia implementing Islamic Sharia law. A quantitative questionnaire survey was conducted to collect the primary data from a pool of 498 beneficiaries of productive zakat in Aceh receiving loans from Baitul Mal Aceh since 2006. The data was collected on economic condition, home condition, health condition, child education costs, vehicle value, time use for leisure, age, sex, business type, education level, working status of spouse, marital status and residency. Data is analyzed by quantitative approach in order to look at the level of objective welfare according to the characteristic of the recipient of productive zakat on a demographic basis. Data were analysed according to Cooper and Pamela (2006) quantitative approach, i.e., describe or define something by creating a profile of a group of problems, people, or events, through data collection and scheduling of data frequencies from variables or interactions among variables in a study. Furthermore, the Statistical Package for Social Sciences (SPSS) Version 20 is used to measure objective well-being with mean level indicators. By following Dyer and Edward (1999), the level of objective wellbeing of zakat beneficiaries is measured by using five levels of categories, where the average score of 1.00 - 1.49 is very low, average score of 1.50 - 2.49 is low, average score of 2.50 - 3.49 is moderate, average score of 3.50 - 4.49 is high and average score of 4.50 - is very high.

3. Result and Discussion

Table 1 shows the basic data of productive zakat recipients in Baitul Mal Aceh according to age, gender, business type, education level, working status of spouse, marital status and residence. The age category showed that the majority of recipients are between 35 years to 44 years (44.6%) (Table 1). While the smallest age category of recipients is located between 64 years and above (1.6%). Women dominate the total of productive zakat recipient by gender (76.3%). The majority business category runs by productive zakat recipients are the retailer (49%). While the smallest group of business category run are barber shop (0.2%) and stationary shop (0.2%). Majority of zakat productive recipient has finished their senior high school (58.2%). While only 4 percent of them did not finish primary school. 74.7 percent spouse of productive zakat recipients is working. Most productive zakat recipients have married (91.6%). The recipients of productive zakat are scattered in urban and rural areas. However, 58.8 percent of them choose to live in urban areas while 41.2% are living in a rural area.

Table 1. The Demography Data of Productive Zakat Recipient in Baitul Mal Aceh Indonesia (n=498)

No	Demographic Items	Frequency	Percent
1	Age :		
	(25 years -34 years)	61	12.2
	(35 year -44 year)	222	44.6
	(45 year -54 year)	160	32.1
	(55 year -64 year)	47	9.4
	(64+ year)	8	1.6
2	Sex		
	Women	380	76.3
	Man	118	23.7
3	Business Type		
	Food And Beverage	172	34.5
	Mechanics	8	1.6
	Fisherman	2	0.4
	Retailers	244	49.0
	Vegetable Sellers	20	4.0
	Tailor	32	6.4
	Farmers Vegetable	8	1.6
	Breeders	8	1.6
	Barber Shop	1	0.2
	Stationary Shop	1	0.2
	Laundry Shop	2	0.4
4	Education Level		
	Did Not Finish Primary School	4	0.8
	Finish Primary School	32	6.4
	Junior High School	143	28.7
	Senior High School	290	58.2
	Diploma	13	2.6
	Bachelor	16	3.2
5	Working Status of Spouse		
	Not Working	126	25.3
	Working	372	74.7
6	Marital Status		
	Single	42	8.4
	Married	456	91.6
7	Residence		
	Rural	205	41.2
	Urban	293	58.8

Table 2 shows the level of wellbeing of respondents' objectives as a whole. The economic dimension shows a low level of well-being (2.47). Respondents' average income was found to be 2.91 at the ranking scale. The respondents' income level was slightly thinner with the average cost of living (2.86), but both were still in the same group (moderate). Unfortunately, the level of family savings per month is still very low (1.96). On average, the dimensions of the home showed a moderate situation (3.41). Although the level of facility indicator is high (3.54) but it is offset by a moderate physical condition (3.29). Health dimensions show high levels of health (3.62). Family health indicators (3.71) and access to health services (3.54) were high. The average level of children education expenditures is still moderate (2.56). On the dimensions of the vehicle, the indicator shows a high average level (3.65). Time dimension shows a low overall average level (1.71). The time to relax per day indicator is 2.23 and recreation 1.19

which is still low. However, the average level of the overall well-being of the respondents was relatively moderate (2.83).

Table 2. Level of Objective Well Being Based on Six Dimensions in Baitul Mal Aceh Indonesia (n = 498)

No	Statement	Mean = 2.83		
		Min. Score	Max. Score	Mean Score
1.Economic Dimension				2.47
	• The family income per month	1	5	2.91
	• Family living costs per month	1	5	2.86
	• Family savings per month	1	5	1.96
2. House Dimension				3.41
	• Home physical condition	2	4	3.29
	• Facilities are at home	1	5	3.54
3. Health Dimension				3.62
	• Family health level	1	5	3.71
	• The level of health service facilities obtained	1	5	3.54
4. Educational Dimension				2.56
	• The cost of schooling for children per month	1	5	2.56
5. Vehicle Dimension				3.65
	• Value of vehicles	1	5	3.65
6. Time Dimension				1.71
	• Time to relax per day	1	5	2.23
	• Frequency of recreation per month	1	5	1.19

Overall, the level of objective well-being was found to be moderate. Objective wellbeing is influenced by the low level of the time dimension and economic dimension which has a low score. It can suppress the excess of the objective well-being level scores on other dimensions. The beneficiaries of productive zakat are small-scale entrepreneurs. Their limited daily income is the major hurdle in employing a larger number of employees. To meet the number of employees, many productive zakat recipients have to involve their family members without being paid as employees. The fact is also supported by Garikipati (2012) who reported that some poor families in developing countries are employing their spouses to manage the workload. Family involvement sometimes cannot be productive to increase the amount of business output because some family members also lack the expertise and are not trained to perform the required work. Therefore, the recipient of productive zakat is forced to increase his working hours to meet the production demand. Moreover, if there are multiple orders from customers, they will reduce the time to rest. This causes the time dimension to be lower than in other dimensions. Similarly, Olinto et al. (2013) stated people in developing countries are forced to work harder and longer in order to improve their life.

The shortage of skilled workers is forcing to increase the working hours. This could affect production quality. Many end products are not up to the marked quality standards due to the inconsistency in precision and expertise of production. The monitoring process for each stage of production is also not feasible. Ultimately these substandard goods result in entrepreneurial losses. This has been supported by the findings of Multifiah (2007) which states that Baitul Mal is only able to lend a small amount of loan, so it is less effective to increase the recipient's income. Lahiri (2012) also stated that most micro, small and medium enterprises are facing the problems of low output productivity, low output quality, lack of fund, unskilled and low profit. Furthermore, marketing of the goods is done through old traditional methods whereas modern digital and social media, i.e., facebook, twitter, etc., can boost the marketability of the products. Mulyana (2014) also support this finding that micro entrepreneurs in Indonesia have only a little knowledge of marketing. The current findings also showed that the propensity to save the money is less than the propensity to buying goods and services. This situation is parallel with the theory of the marginal propensity to consume given by Keynes (1936). In that theory it is clear that the characteristics of the lower class people are the percentage of their savings and the investment is smaller than the percentage of the money they spend. That's because their income is more spent on buying the basic needs of his family. This proves that the recipients of productive zakat are still not categorized as a high-level society, but they are still among the moderate society.

Table 3 shows the level of objective wellbeing according to seven demographic variables: age, gender, business type, education level, working status of spouse, marital status and residence of the recipient. In the age variable, the highest level of wellbeing was present in the age group 55 years-64 years (2.99) which is still on a moderate level of objective wellbeing (Table 3). Meanwhile, the lowest group was 64+ years old (2.47) and included in the low level of objective well-being. By gender, men have a higher level of wellbeing (2.87) than women (2.78). However, both genders are at a moderate level. The business type that has the highest level of wellbeing is the stationary shop (3.36) effort which is at a moderate level. The level of objective wellbeing of barbershop (2.18) is still in the low. Diploma holds the highest level of wellbeing among the group of education (2.90) which is still a moderate level. The lowest level of objective wellbeing in education is the respondents who did not finish their primary school (2.04) and is classified as a low level of objective wellbeing. Respondents whose spouse also worked (2.85) had a higher level of objective wellbeing than unemployed pair (2.67), but both are still at a moderate level of objective wellbeing. Respondents who have a partner (2.82) have a higher level of objective wellbeing than those who do not have a partner (2.58). Both are still at a moderate level of objective wellbeing. The rural respondents (2.88) have a higher level of objective wellbeing than those who are living in the city (2.75), and both are still at a moderate level of objective wellbeing.

Table 3. Objective Well-Being Based on Demographics in Baitul Mal Aceh Indonesia

No	Demographic Items	Level of Objective Wellbeing
1	Age :	
	(25 years -34 years)	2.80
	(35 year -44 year)	2.79
	(45 year -54 year)	2.78
	(55 year -64 year)	2.99
	(64+ year)	2.47
2	Sex	
	Women	2.78
	Man	2.87
3	Business Type	
	Food And Beverage	2.77
	Mechanics	2.86
	Fisherman	2.68
	Retailers	2.82
	Vegetable Sellers	2.86
	Tailor	2.78
	Farmers Vegetable	2.61
	Breeders	2.76
	Barber Shop	2.18
	Stationary Shop	3.36
	Laundry Shop	3.09
4	Education Level	
	Did Not Finish Primary School	2.04
	Finish Primary School	2.64
	Junior High School	2.66
	Senior High School	2.90
	Diploma	2.90
	Bachelor	2.76
5	Working Status of Spouse	
	Not Working	2.67
	Working	2.85
6	Marital Status	
	Single	2.58
	Married	2.82
7	Residence	
	Rural	2.88
	Urban	2.75

According to demographic variables, the level of objective wellbeing of zakat productive recipient did not show a striking difference. Based on age, gender, type of business, education level, spouse's employment status, marital status and residence of the respondents on average still showed a moderate level of wellbeing. However, age ≥64 showed a low level of objective wellbeing because older entrepreneurs are unable to work more to earn better income. In addition, the limited number of employees, the small number of sales leads to a low level of objective well-being for barbers. Very low levels of education also cause the level of well-being to become low. Low-educated respondents have a lack of knowledge of how to grow their businesses. Therefore, the productive zakat recipient should have the guidance of financial management and marketing of good goods and services. The provision of related courses should be given to the recipient of productive zakat and their family members who can potentially increase his family's income. In addition, Baitul Mal Aceh needs to increase the amount of productive zakat loans and increase the amount of zakat collection by promoting the awareness of paying zakat to the community. A large collection of zakat can help more productive zakat recipients in the future. The Aceh government expected to be more active in creating new job opportunities for the Acehnese people. This is believed to have a positive effect on the enhancement of the future objective well-being of the productive zakat recipient of Baitul Mal Aceh.

4. Conclusion

Overall, the findings showed that the objective wellbeing of productive zakat recipient is still relatively moderate. Vehicle dimension has the highest level of objective wellbeing while the time dimension has a very low level of objective wellbeing among the productive zakat recipients. By following the demography, it's shown that all categories are at a moderate level of objective wellbeing except age groups ≥64, the barber, and low educated respondents who are still at a low level of objective well-being.

Acknowledgments

The authors acknowledge with gratitude the support given by University College Bestari and Universitas Mercu Buana to conduct research in the field of Economic and Social Sciences.

References

Abdullah, A. (2013). Strategi Pendayagunaan Zakat Produktif. *Al-Mashlahah: Jurnal Hukum Islam dan Pranata Sosial Islam* 1(01): 1-13. DOI: 10.30868/am.v1i01.105

Armiadi (2008). Zakat produktif: Solusi Alternatif Pemberdayaan Ekonomi Umat (Potret & Praktek Baitul Mal Aceh). Ar-Raniry Press Darussalam, Banda Aceh. Indonesia.

BPS Indonesia (2017). Indonesian Poverty Severity Index by Province. https://www.bps.go.id. Accessed 15 June 2018.

Cavallo, E. A. & Noy. I. (2009). *The economics of Natural Disasters: A Survey.* IDB Working Paper Series, No 35. DOI:10.2139/ssrn.1817217

Cooper, D. R. & Pamela S. S. (2006). *Marketing Research*. New York, McGraw-Hill/Irwin Companies, Inc. America.

Dyer, J. E. & Edward W. O. (1999). The Influence of Science Applications in Agriculture Courses on Attitudes of Illinois Guidance Counselors at Model Student-Teaching Centers. *Journal of Agricultural Education* 40(4): 57-66. DOI: 10.5032/jae.1999.04057.

Ganguly, S. (2018). *Micro-Finance and poverty in India: A state-level analysis of impact assessment*. In Atsede, W. & Brychan, T. C., (Eds.), Financial Entrepreneurship for Economic Growth in Emerging Nations. IGI Global, pp. 194-216: DOI: 10.4018/978-1-5225-2700-8.ch010

Garikipati, S. (2012). Microcredit and Women's Empowerment: Through the Lens of Time-Use Data from Rural India. *Development and Change* 43(3): 719-750. DOI: 10.1111/j.1467-7660.2012.01780.x

Hassan, K. M., & Ali, A. (2010). *An Integrated Poverty Alleviation Model Combining Zakat, Awqaf, and Microfinance*. In Ismail, A. G., Mat Hassan, M. E., Ismail, N. & Shahimi, S. (Eds.). Proceeding of Seventh International Conference – The Tawhidi Epistemology: Zakat and Waqf Economy, 6 – 7 January 2010. Institut Islam Hadhari Universiti Kebangsaan Malaysia, Bangi, Malaysia.

Howell, R. T. & Collen. J. H. (2008). The Relation of Economic Status to Subjective Well-Being in Developing Countries: a Meta-Analysis. *Psychological Bulletin* 134(4): 536-560. DOI: 10.1037/0033-2909.134.4.536.

Kataria, J. R. (2011). Poverty in South Asia: An overview. *Interdisciplinary Journal of Contemporary Research in Business* 3(3): 389-396. ISSN (2073-7122).

Keynes, J. M. (1936). *General Theory of Employment, Interest, and Money*. Palgrave Macmillan. London. United Kingdom. ISBN 9780230004764.

Lahiri, R. (2012). *Problems and prospects of micro, small and medium enterprises (MSMEs) in India in the era of globalization*. Paper presented at the International Conference on the Interplay of Economics, Politics, and Society for Inclusive Growth, 15-16 October 2012. Thimphu, Bhutan.

Muda, M. S., Wan, A. A. W. M. A. and Nik,, W. O. (2006). Analisis kesejahteraan Hidup Nelayan Pesisir. *Jurnal Kemanusiaan*, 4(2):58-77. ISSN: 1675-1930.

Multifiah. (2007). Peran Zakat, Infaq dan Shadaqah Terhadap Kesejahteraan Rumah Tangga Miskin (Studi Penanggulangan Kemiskinan Melalui Bantuan Modal Pendidikan dan Kesehatan di Daerah Malang). (Unpublished doctoral dissertation), Universitas Brawijaya, Malang, Indonesia.

Mulyana, Y. (2014). Model *Pengembangan Kompetensi Pemasaran Produk Rajut dalam Meningkatkan Keunggulan Bersaing UKM Rajut Binongjati di Kota Bandung*. Proceeding Hasil Penelitian Hibah Program Desentralisasi, Sentralisasi dan Hibah Internal Unpas 2014, 24 December 2014, Lembaga Penelitian Universitas Pasundan, Bandung, Indonesia.

Nagayya, D., & Rao, D. K. (2009). Micro Finance and Support Organizations in the Southern States. *Small Enterprises Development, Management & Extension (Sedme) Journal* 36(4): 285-301. ISSN: 0970-8464.

Nurlaila, & Hasnita, N. (2013). Tingkat Keberhasilan Program Pendayagunaan Zakat Produktif pada Baitul Mal Provinsi Aceh. *Share Journal of Islamic Economics and Finance*, 2(2).170-187. DOI:10.22373/share.v2i2.1497

Olinto, P., Kathleen, B., Carlos, S. & Hiroki, U. (2013). The State of the Poor: Where are the Poor, Where is Extreme Poverty Harder to End, and What is The Current Profile of the World's Poor. *Economic Premise*, 125, 1-8.

Riyaldi, M. H. (2015). Faktor-Faktor yang Mempengaruhi Keberhasilan Penerima Zakat Produktif Baitul Mal Aceh : Satu Analisis. *Jurnal Perspektif Ekonomi Darussalam* 1(2): 185-202. DOI:10.24815/jped.v1i2.7163

Sani, A., Muhammad, S. K., Hafiz, R. N. A., & Aziz, B. (2017). Role of Micro Finance Institutions in Poverty Reduction. *Imperial Journal of Interdisciplinary Research* 3(2): 2009-2012. ISSN: 2454-1362.

Sugiharto, E. (2007). Tingkat Kesejahteraan Masyarakat Nelayan Desa Benua Baru Ilir Berdasarkan Indikator Badan Pusat Statistik. *Ekonomi Pertanian & Pembangunan* 4(2): 32-36. ISSN : 1693-9646.

Wahyudi, R.., Abubakar, H. & Sofyan, S. (2014). Analisis Belanja Pemerintah dan Pertumbuhan Ekonomi Terhadap Tingkat Kemiskinan di Aceh. *Jurnal Magister Ilmu Ekonomi* 2(3): 49-59. ISSN 2302-0172

Wahyuni, S. (2017). Peranan LAZ sebagai pengelola zakat dalam pendayagunaan zakat produktif: Studi kasus Rumah Zakat Medan. *At-Tafahum: Journal of Islamic Law* 1(2): 104-125. ISSN: 2580-4707.

White, S. C. (2008). *But What is Well-Being? A Framework for Analysis in Social and Development Policy and Practice*. Paper presented at the Conference on regeneration and wellbeing: research into practice, University of Bradford. 24-25 April 2008. United Kingdom.

Wu, J. (2013). Landscape Sustainability Science: Ecosystem Services and Human Well-Being in Changing Landscapes. *Landscape Ecology* 28(6): 999-1023. DOI: 10.1007/s10980-013-9894-9

Zarina, K., Sanep, A. & Noor, M. A. M. (2012). *Zakat as A Catalyst to Economics Development: Towards High-Income Country*. Seventh Malaysian National Economic Conference, 4 – 6 June 2012, Hotel Kinta Riverfront, Ipoh, Perak, Malaysia.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 218-229
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.81

The Influence of Penalties, the Trust on Authorities, and the Tax Audit Toward Tax Compliance

Retnaningtyas Widuri[1], Devina[2], Fransiska Marta[3], Yulia Wati[4]

[1] Tax Accounting, Petra Christian University, widuri@petra.ac.id
[2] Tax Accounting, Petra Christian University, devinabudiman97@gmail.com
[3] Tax Accounting, Petra Christian University, fransiska.aam@gmail.com
[4] Tax Accounting, Petra Christian University, yuliawatii3333@gmail.com

Abstract
This study aims to examine the effect of tax penalties, trust in the tax authorities, and tax audit of taxpayer compliance. This research is based on a decrease in tax revenues that still has not reached the target set in the state budget ("APBN"). This study intends to identify factors that have a significant effect on taxpayer compliance which is limited to factors of tax penalties, trust in the tax authorities, and tax audit. This research will be conducted by using a quantitative approach; it can be done by using an approach through 153 respondents as a sample of this research. The data analysis technique used is multiple linear regression. The results of the study show that partially and simultaneously tax penalties trust in the tax authorities, and tax audit has a significant effect on taxpayer compliance. Determination coefficient value of 0.426 shows that the amount of 0.426 (42.6%) variation of the tax compliance variable is able to be explained by variables tax penalties, tax audit, and trust in the tax authorities.

Keywords: Tax, Tax Penalties, Trust in Tax Authorities, Tax Audit, Tax Compliance

1. Introduction

The development that occurs in a country can be done well, not apart from financial support. The availability of funds for the government is vital to support the process of implementing development. One of the funds obtained by the government is originated from tax. The Ministry of Finance as quoted by the online news portal detik (2019) noted that the realization of tax revenue reached 1,315 trillion. That achievement is the realization of around 92% of the target that set in the state budget ("APBN") which reached 1,424 trillion, so there is still around 109 trillion left. The realization of 92.41% or Rp. 1,315 trillion is a combination of non-oil and gas tax revenues of Rp. 1,251.2 trillion and on oil and gas income tax of Rp. 64.7 trillion. If the non-oil tax consists of non-oil and gas income tax, IDR 686.8 trillion or 84.1% of the IDR 817 trillion targets is specified. While the value added tax was recorded at Rp. 538.2 trillion or 99.3% of the target of Rp 541.8 trillion. Meanwhile, land and building tax was noted at Rp. 19.4 trillion or reached 111.9% of the target of Rp. 17.4 trillion. As for other taxes collected totaling Rp. 6.8 trillion or 70.1% of the target in the APBN of Rp. 9.7 trillion. Based on this data, the state revenue from the tax sector is still not maximum, especially non-oil and gas taxes.

The tax revenue is not yet maximum possibly because of a lack of public compliance to pay taxes. There are still many people who do not want to fulfill their tax obligations, or there are still many tax arrears. In accordance with Minister of Finance Regulation of the Republic of Indonesia No. 74 / PMK.03 / 2012 in Chapter II Article 2 states that compliant taxpayers are those who fulfill four criteria, which are: (1) on time in submitting notification letters for all types of taxes, (2) having no tax arrears, except arrears taxes that have obtained permission to pay gradually or delay payment of taxes, (3) financial statements that have been audited by public accountants or government financial supervision institutions with unqualified opinions for 3 (three) years in a row, and (4) have never been convicted criminal law in taxation based on a court decision that has fixed legal power in the last 5 (five) years. Taxpayer compliance has a critical value because if there is incompliance, it will also trigger an attempt to avoid tax which will decrease the revenue for the state treasury.

Mohdali *et al.*, (2014) in his research showed that giving penalties had a significant positive effect on tax compliance. Penalties can prevent tax avoidance. The research that is conducted by Hantoyo *et al*. (2016) shows that tax penalty variable has a dominant influence on taxpayer compliance. Tax penalties are guarantees that the provisions of the tax laws will have complied or in other words tax penalties are a tool of prevention so that taxpayers will not violate these regulations. The penalties will be given to neglectful taxpayers or with serious acts of fraud.

Taxpayer compliance is also inseparable from the trust on tax authority. This is inseparable from the existence of tax corruption cases that involve employees in the taxation authority. Trust in the tax authority has an important role in why procedural justice encourages the voluntary compliance of people in paying taxes. Tax authorities that can be trusted will not abuse their power or authority. It will encourage people to obey the regulation of taxes' payment, where people will pay taxes voluntarily. Previous research which has been conducted by Zemiyanti (2016) shows that trust in the tax authority has a significant effect on tax compliance. Taxpayer compliance is not only related to the taxpayer's trust in the tax authority but also related to the tax audits.

A well-structured tax audit can provide valuable support in collecting information about the tax system (including taxpayer compliance behavior patterns), educating taxpayers (increasing compliance in the future). Taxpayers must realize their obligation that there will be consequences to those who have not reported their tax and those who do incompliance acts will be detected by the authorities when there is a tax audit in order to prevent taxpayers' disobedient acts (Mebratu, 2016). The tax audit mechanism which has been conducted by the tax authority is an important effort to improve taxpayer compliance also has a goal in the increase of tax revenue (Cahyonowati, 2012). Law Number 28 of 2007 regulates that the Director General of Taxes can conduct tax audits to find out whether tax obligations have fulfilled formal obligations and/or material obligations. The results of the inspection shall be included in the Tax Assessment Letter which shows Payments or More Payments. The Director General of Taxes is also authorized to provide administrative penalties in the form of fines for the behalf of the orderly administration of taxation and increase taxpayer compliance in fulfilling the obligation to submit a notification letter.

This research's goal is to contribute in an attempt to increase the tax revenue. Increasing tax revenue can happen when the taxpayer has a value of compliance to fulfill their obligations. This research will explore some factors that can influence taxpayer compliance which is focused on tax penalties, trust in authority, and tax audits.

2. Literature Review

2.1 Tax

In general, taxes can be defined as collections from the society by the state (government) based on laws that can be forced and owed by taxpayers without getting recompense directly, where the results are used to finance the state expenses in government administration and development. Meanwhile, in the Laws of the Republic of Indonesia Number 16 of 2009 defines taxes as: tax is an obligatory contribution to the state owed by an individual or an entity that is compelling based on the Act, which is used for the needs of the state and prosperity of the people. So, tax is a binding obligation and is a form of transfer of income from citizens to the state with provisions made based on laws that can be forced and used for the benefit of the state.

2.2 Taxpayer

Based on Article 1 number 2 of Law Number 28 of 2007 concerning General Provisions and Tax Procedures, it is explained that Taxpayers are individuals or entities, including taxpayers, tax withholders, and tax collectors, that have taxation rights and obligations in accordance with regulatory provisions taxation legislation. According to Law Number 36 of 2008 concerning Income Tax, Taxpayers are individuals or parties that have fulfilled subjective obligations and objectively. Objective if the person concerned has received or earned income taxed based on the tax provisions. Subjective obligations are fulfilled, among others, with payment and reporting of tax owed. Thus the new tax subject will become taxpayer if someone or entity besides fulfilling formally as a subject of tax as well as fulfilling material requirements, that is the concerned obtains income on non-taxable income ("PTKP") for individuals and/or obtains taxable income for business entities. Furthermore, the taxpayers attached to tax obligations include calculation, consideration, payment, and tax return reporting.

2.3 Tax Penalties

Taxation penalties are guarantees that the provisions of legislation taxation (tax norms) will be obeyed or in other words, taxation rules are a prevention tool so that taxpayers do not violate the norms of taxation (Siamena, et al., 2017). Knowledge of penalties in taxation is important for the Indonesian government in choosing to implement its own valuation system within the framework of tax collection. Taxpayers are entrusted with calculating deposits and reporting their own taxes. To be able to run well, each taxpayer requires knowledge of taxation both in terms of regulation and technical administration. In order for its implementation to be orderly and in accordance with the expected targets, the government has prepared penalties regulated in the applicable Taxation Law (Putra and Hidayat, 2018). Each type of tax violation from the mildest to the most severe is the threat of penalties. Therefore, the firmness of tax penalties is needed so that public awareness in paying taxes can be increased. Taxation penalties consist of administrative penalties and criminal penalties. Administrative penalties consist of fines, interest, and increases, while criminal penalties consist of fines, confinement, and imprisonment. The lightweight of penalties depends on the violation or crime committed.

2.4 Trust to the Authority

The authority related to taxation issues in Indonesia is the Directorate General of Taxes who is competent in collecting state revenues from the tax sector which aims to support the independence of the APBN financing. Tax authorities are expected to have competence in skills, knowledge, and experience in of taxation policies, tax administration, and tax laws. In addition, taxpayers must also have high motivation as public servants. Tax authorities are expected to have an effect on tax compliance in paying taxes (Kamil, 2015). The tax authority's orientation towards taxpayers and the style of interaction conducted by the tax authorities will create a tax climate. The climate of trust will foster cooperation and voluntary compliance from taxpayers, while the climate of resistance is characterized by a reluctance to cooperate and require the power of authority to ensure compliance (forced compliance) (Bornman, 2015).

2.5 Tax Audit

Tax audit based on Article 1 paragraph (25) of Law Number 28 of 2007 concerning Third Amendment to Law Number 6 of 1983 concerning General Provisions and Tax Procedures is a series of activities to collect and process data, information, and / or evidence conducted in a manner objective and professional based on an inspection standard to test compliance with the fulfillment of tax obligations and / or for other purposes in order to conduct the provisions of tax laws and regulations. Mebratu (2016) explains that tax audit is checks of individual or organizational tax reports by the relevant tax authorities to ensure compliance with applicable laws and tax regulations in a country. At the time of the tax audit, an audit will be conducted on whether the taxpayers have reported their taxes properly and fulfilled other obligations.

2.6 Taxpayer Compliance

The obedience behavior of people is the interaction between the behavior of individuals, groups, and organizations. In the case of applicable tax rules are taxation rules. So in relation to taxpayers - who are obedient, the definition of taxpayer compliance is an obedience to do provisions or tax rules that are required to be implemented (Mandagi, et al., 2014). Tax compliance can be also defined as a behavior where the Taxpayers (WP) fulfill all tax obligations and carry out their taxation rights (Cahyonowati, *et al*, 2012).

2.7 Development of Hypotheses

The Relationship of Penalties with Taxpayer Compliance

If tax penalties are given to taxpayers who do not have high compliance, they can be given a contribution to tax compliance. However, this can occur if the implementation of the procedure is considered fair and upholds a sense of justice (Van Dijke and Verboon, 2010). The higher the penalties were given to taxpayers, the lower the taxpayer's decision to do tax avoidance. If the taxpayer has an awareness that violations committed when avoiding taxes and the consequences that must be received when not compliant, the taxpayer will reduce the tendency to avoid taxes (Engida and Baisa, 2014). Penalties are used to create compliance in conducting their tax obligations. Therefore, it is important for taxpayers to have an understanding of tax penalties to find out the legal consequences if they do not have compliance with their obligations. Based on various opinions, the first hypothesis in this research is:

H_1: There is a significant effect of penalties on taxpayer compliance.

The Relationship between Trust in Tax Authorities and Taxpayer Compliance

Taxpayer trust in tax authorities has an important contribution in encouraging people to have voluntary compliance (Mahadianto and Astuti, 2017). Kirchler *et al*., (2008) stated that trusts owned by taxpayers to the tax authorities in local countries are factors that are important determinants in generating voluntary tax compliance. If the tax authorities and employees owned treat the taxpayer equally in a respectful and responsible manner, voluntary tax compliance will be able to increase. Thus a synergy between tax authorities such as taxpayers will be created. Policies in influencing taxpayers to obey paying taxes voluntarily are determined by the level of trust held by the public at the tax authorities (trust in authorities). Therefore, the policy of increasing public trust in the tax authorities must be prioritized in order to increase voluntary tax compliance (Ratmono, 2014). The role of the tax authority in increasing voluntary compliance from taxpayers is definitely an important matter. Tax compliance places the government and tax authorities as the main parties that play a role in managing the tax system to reduce tax avoidance so that it has a significant impact on determining the attitude of taxpayers, one of which is tax compliance (Engida and Baisa, 2014). Based on these various opinions, the second hypothesis in this study is:

H_2: There is a significant effect of trust in the tax authority on taxpayer compliance.

The Relationship of Tax Audit with Taxpayer Compliance

Tax audit has an impact on tax compliance. This finding shows that tax audits play an important role to increase voluntary compliance. The frequency and accuracy of tax audit can encourage taxpayers to be more careful in completing tax refund, report all income and claim the correct evidence of withholding tax to ensure their tax obligations. Otherwise, taxpayers who have never been subjected to tax audit have a greater desire to disobey by giving their tax reports incorrectly (Engida and Baisa, 2014). Based on these various opinions, the third hypothesis in this research is:

H_3: There is a significant effect of a tax audit on tax compliance.

3. Research Method

3.1 Sample and Criteria of Respondents

The sample used in this research is a personal taxpayer in the area of East Java, Bali, and Central Kalimantan. The criteria used are personal taxpayers who have income above 4.8 billion in a year with the accountancy method. The numbers of samples obtained in this research were 153 personal mandates consisting of 43 personal mandates from Bali, 64 personal mandates from East Java, and 46 personal mandates from Central Kalimantan.

3.2 The instrument for Research, Measurement, and Indicators

The research instrument used in this research was a questionnaire that was measured using a Likert Scale with a choice of answers ranging from Strongly Disagree (STS), Disagree (TS), Neutral (N), Agree (S), and Strongly Agree (SS). The numbers of statement indicators used in the questionnaire were 28 statements consisting of 7 statements for the penalty variable, 7 statements for the variable trust in authority, 7 statements for the tax audit variable, and 7 statements for the variable tax compliance

3.3 Data Analysis Technique

The data analysis technique is a process of systematical by applying statistical or logical techniques to describe, illustrate, and evaluate some data in order to draw the best result base on these techniques. In this research, the data analysis technique is a simple linear regression; to be exact is multiple regression analysis. This technique uses a program which is SPSS 25 program. Multiple regression analysis is a statistical technique that can be used to analyze a relation between a single dependent variable with several independent variables.

4. Results and Discussion

4.1 Profile of Respondents and Descriptive Statistics

The profile of the respondents described the characteristics of respondents based on location, gender, age, and type of work. Based on table 1 above shows that from 153 respondents most of them were from East Java (42%), male (65%), had a range of ages 21-35 years and the type of work was business activities (84%). For more details, it can be seen in table 1 as follows.

Table 1. Respondents Profile

Characteristics	Label	N	Percentage
Location	Bali	43	28%
	East Java	64	42%
	Central Kalimantan	46	30%
Gender	Man	99	65%
	Woman	54	35%
	≥ 51 years old	53	35%
	36 - 50 years old	14	9%
	21 - 35 years old	86	56%
Type of Business	Business Activity	129	84%
	Self-Employment	24	16%

Table 2 shows the mean, standard deviation, minimum value, and maximum value of each variable. The higher the mean value, the respondent shows the more supportive (tends to agree) for all statements on each variable.

Table 2. Variable Descriptive Statistics

Characteristics	Label	Value
Tax Penalties	Minimum	1
	Maximum	5
	Mean	3,61
	Standard Deviation	0,65
Trust in Tax Authorities	Minimum	1
	Maximum	5
	Mean	3,97
	Standard Deviation	0,74
Tax Audit	Minimum	1
	Maximum	5
	Mean	4,05
	Standard Deviation	0,70
Tax Compliance	Minimum	2
	Maximum	5
	Mean	4,21
	Standard Deviation	0,63

The average value in the compliance variable is the highest compared to other variables which are equal to 4.21 with a standard deviation of 0.63. The penalty variable has an average value of 3.61 with a standard deviation of 0.65, the variable trust in authority has an average value of 3.97 with a standard deviation of 07.4 and the tax audit variable has an average value of 4.05 with a standard deviation of 0.70. The penalties variable, trust in the tax authority, and tax audit have a minimum value of 1 which indicates that there are respondents who give strongly disagree answers to the statements on the three variables. The results of the descriptive statistics also show that the standard deviation value of each research variable is smaller than the average value so that the respondent's answers tend to be homogeneous

4.2 Testing Validity and Reliability

The testing research instruments are using validity and reliability. Validity shows how far to which the data collected does not deviate from the description of the intended variable. This research uses Pearson Correlation to test the validity of research variables consisting of penalties, trust in authority, tax audit, and tax compliance. The minimum validity requirements are considered to be fulfilled if the correlation coefficient value produced has a significant level of less than 0.05. The results of the research shown in Table 3 are all variables consisting of penalties, trust in the tax authority, and valid tax audit because statement indicators have a significant value of less than <0.05.

Table 3. Pearson Correlation Results

Variables	Indicators	Coefficient Correlation	Significant
Tax Penalties	X1.1	0,674**	0,000
	X1.2	0,424**	0,000
	X1.3	0,674**	0,000
	X1.4	0,487**	0,000
	X1.5	0,497**	0,000
	X1.6	0,618**	0,000
	X1.7	0,611**	0,000
Trust in Tax Authorities	X2.1	0,626**	0,000
	X2.2	0,658**	0,000
	X2.3	0,708**	0,000
	X2.4	0,687**	0,000
	X2.5	0,675**	0,000
	X2.6	0,680**	0,000
	X2.7	0,705**	0,000
Tax Audit	X3.1	0,606**	0,000
	X3.2	0,533**	0,000
	X3.3	0,658**	0,000
	X3.4	0,649**	0,000
	X3.5	0,738**	0,000
	X3.6	0,649**	0,000
	X3.7	0,320**	0,000
Tax Compliance	Y.1	0,759**	0,000
	Y.2	0,750**	0,000
	Y.3	0,723**	0,000
	Y.4	0,719**	0,000
	Y.5	0,667**	0,000
	Y.6	0,657**	0,000
	Y.7	0,495**	0,000

The reliability test shows a degree of accuracy shown by the measurement instrument where testing can be done internally is called reliability, that is by analyzing the consistency of the items that exist. The reliability test of this research uses Cronbach's Alpha. Cronbach's Alpha value> 0.6, then it can be said that the question items used have met reliability. The reliability test results as shown in Table 4 are all variables that consist of penalties, trust in authority, tax audit, and tax compliance have Cronbach Alpha values greater than 0.6 so that they can be said to be reliable.

Table 4. Cronbach's Alpha Result

Variables	Cronbach's Alpha
Tax Penalties	0,647
Trust in Tax Authorities	0,802
Tax Audit	0,697
Tax Compliance	0,811

4.3 Normality Test

The normality test is done to test whether the regression results obtained to fulfill the assumptions of normality. The normality test is conducted using the Kolmogorov-Smirnov Test, the provisions used are based on the value of Asymp. Sig. The provisions used are declared normal if a significant value is greater than 0.05. The test results shown in Table 5 are obtained as the Asymp. value. Sig for 0.200 which is greater than 0.05 so that it can be concluded that the normality assumption is fulfilled.

Table 5. One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
N	153
Test Statistic	.058
Asymp. Sig. (2-tailed)	.200

4.4 Multicollinearity Test

Multicollinearity test is conducted to detect whether the independent variables have a relationship so that multicoll occur. Multicollinearity can be tested by using tolerance values and VIF. To detect the presence or absence of multicollinearity in the regression model are as follows 1) has a tolerance rate above> 0.1 and; 2) has a VIF value below <10.

Table 6. Multicollinearity Test Results

	Tolerance	VIF
Tax Penalties	0,763	1,311
Trust in Tax Authorities	0,658	1,520
Tax Audit	0,530	1,887

In accordance with the presentation of the data above, it can be seen that the VIF value of each independent variable is less than 10 and has a tolerance value of more than 0.1, so it can be concluded that the regression model used in this study is free from multicollinearity.

4.5 Heteroscedasticity Test

Heteroscedasticity test aims to test whether the regression model has similarity in residual variance, one observation to another observation. If the variance shows a fixed pattern, it can be stated that heteroscedasticity does not occur. If the variance from the residual one observation to another observation remains, it is called homokedasticity, and if it is different, it is called heteroscedasticity. Detecting the presence or absence of heteroscedasticity can be done using Scatterplot charts. The result of the research shown in Figure 1 shows no clear pattern, and the points spread above and below the number 0 on the Y-axis so that there is no heteroscedasticity

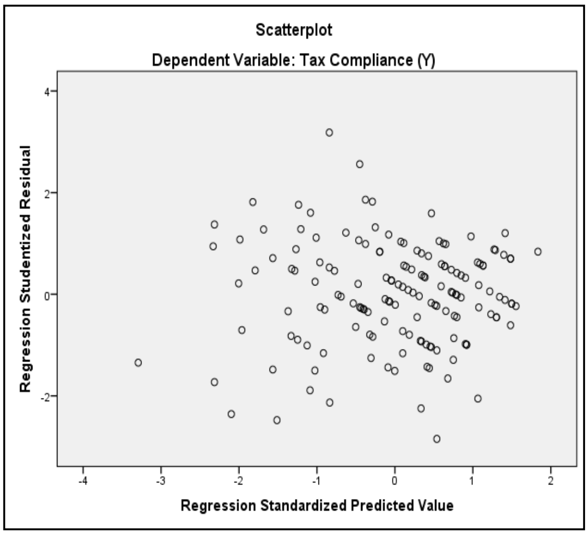


Figure 1. Heteroscedasticity Test

4.6 Analysis of Multiple Linear Regression

Multiple linear regression analysis is a statistical technique that can be used to analyze the relationship between one single dependent variable and several independent variables. Based on the results of data processing that have been done using the SPSS 25 program, the regression coefficient values are obtained as follows:

Table 7. Results of Multiple Linear Regression

Variables	Coefficient Regression (B)	t-count	Significant
Constant	0,907		
Tax Penalties	0,417	5,019	0,000
Trust in Tax Authorities	0,169	2,581	0,011
Tax Audit	0,277	3,195	0,002

Based on the results shown in Table 4.9, it can be explained the regression coefficient value and t-count and its significance as follows:

1. The regression coefficient value for constant obtained is 0.907. This means that when the independent variable consisting of penalties, trust in the tax authority, and tax audit is assumed to be constant or has no effect, taxpayer compliance has a value of 0.907.
2. The regression coefficient for the penalty variable is 0.417. This means that if the penalties increase by one unit then taxpayer compliance will increase by 0.417 with the assumption that the other independent variables are trust in the tax authority and tax audit is in a fixed position. The t-count value for the penalty variable is 5,019 with a significant level of 0,000 which is lower than 0.05 so that it can be concluded that there is a significant effect of penalties on taxpayer compliance. Thus H_1 in this research is accepted.
3. The regression coefficient for the variable trust in the tax authority is 0.169. This means that if trust in the tax authority has increased by one unit then taxpayer compliance will increase by 0.169 with the assumption that the other independent variables are penalties and tax audit are in a fixed position. The value of t-count for the variable trust in the tax authority is 2.581 with a significant level of 0.011 which is lower than 0.05 so that it can be concluded that there is a significant effect of trust in the tax authority on taxpayer compliance. Thus H_2 in this research is accepted.
4. The regression coefficient for the tax audit variable is 0.277. This means that if the tax audit has increased by one unit then taxpayer compliance will increase by 0.277 with the assumption of other independent variables that is penalties and tax audits are in a fixed position. The value of t-count for the tax audit variable is 3.195 with a significant level of 0.002 which is lower than 0.05 so that it can be concluded that there is a significant influence on the audit of tax compliance. Thus H_3 in this research is accepted.

4.7 ANOVA Test and Determination Coefficient

ANOVA test is conducted to determine whether or not there is a simultaneous influence of variable penalties, trust in the tax authority, and tax audits of taxpayer compliance. Table 8 shows the value of F obtained at 36.808 with a significant level of 0.000 which is less than 0.05 so that it can be concluded that the effect is simultaneously variable penalties, trust in the tax authority, and tax audits of taxpayer compliance.

Table 8. ANOVA Test

	Value
N	153
F	36,808
Sig	0,000

The coefficient of determination (R^2) is used to measure how far the ability of the model in explaining dependent variable variations. R^2 has a value ranging from 0 to 1. If the value of R^2 shown has a value reach number 1 or close to number 1, it can be explained that the independent variable used in the research model is able to explain the dependent variable well. Conversely, if the value of R^2 shown has a value reach the number 0 or close to the number 0, it can be explained that the independent variable used in the research model is less able or unable to explain the dependent variable. The result of the coefficient of determination analysis is as follows:

Table 9. The Coefficient of Determination

	Value
N	153
R	0,652
R Square	0,426

Based on table 9, it can be seen that the correlation value (R) is 0.652 which indicates that there is a relationship with the strong enough category between tax penalties, trust in the tax authority, and tax audit of tax compliance. Determination coefficient value of 0.426 shows 0.426 (42.6%) variations of the tax compliance variable that can be explained by variable tax penalties, trust in the tax authorities, and tax audits.

Discussion

The Effect of Penalties on Taxpayer Compliance

Based on the research result, it can be seen that the first hypothesis in this research is proven, meaning that there is a significant effect of penalties on taxpayer compliance. The results of hypothesis testing obtained an at-count value for the penalty variable of 5,019 with a significant level of 0,000 which is lower than 0.05. The results of this research support previous studies conducted by Hantoyo *et al*., (2016) and Kamil (2015). Thus it can be said if the penalties imposed by taxpayers who do not have compliance have a significant contribution in causing taxpayers to comply with their tax obligations. The higher penalties were given to taxpayers, the lower the taxpayer's decision to do tax avoidance. If the taxpayer has an awareness that violations committed when avoiding taxes and the consequences that must be received when not compliant, the taxpayer will reduce the tendency to avoid taxes (Engida and Baisa, 2014). Penalties are imposed to create compliance in conducting their tax obligations. Therefore, it is important for taxpayers to have an understanding of tax penalties to find out the legal consequences if they do not have compliance with their obligations.

Taxation penalties are a guarantee that taxation legislation (tax norms) will be followed, obeyed or in other words, taxation penalties are a deterrent so that taxpayers do not violate taxation norms (Siamena, et al., 2017). The law governing the imposition of tax penalties is contained in Law No. 28 of 2007. There are two forms of penalties in taxation, which are criminal penalties and administrative penalties. Threats to the violation of tax norm can be threatened with administrative penalties, criminal penalties, and also with administrative and criminal penalties. The implementation of tax penalties can lead to the fulfillment of tax obligations by taxpayers so that taxpayers will obey because they think of severe penalties because of illegal actions that do not fulfill tax obligations.

The Effect of Trust in Tax Authorities on Taxpayer Compliance

Based on the results of the research, it can be seen that the second hypothesis in this research is proven, meaning that there is a significant effect of trust in the tax authority on taxpayer compliance. The calculated value for the trust variable on the tax authority is 2.581 with a significant level of 0.011 which is lower than 0.05. The results of this research support the previous research conducted by Kamil (2015) and Zemiyanti (2016), but on the contrary, this research contradicts the results of research conducted by Mahadianto and Astuti (2017) which show different results that trust in authority does not affect taxpayer compliance.

Taxpayer trust in tax authorities has an important contribution in encouraging people to have voluntary compliance (Mahadianto and Astuti, 2017). Kirchler *et al*., (2008) stated that trusts owned by taxpayers to the tax authorities in local countries are factors that are important determinants in generating voluntary tax compliance. Trust is one of the aspects that build social life which is an element of social reality. Slippery slope model (Kirchler, et al. 2008) supports the fairness heuristic theory of policies to increase voluntary compliance that depends on the level of social trust in the tax authority. People who feel justice will comply with tax obligations but with the society trust in the compliance tax authority that arises not only forced compliance but will lead to voluntary compliance.

Therefore, the policy of increasing public trust in the tax authority must be prioritized in order to increase voluntary tax compliance (Ratmono, 2014). The role of the tax authority in increasing voluntary compliance from taxpayers is clearly an important matter. Tax compliance places the government and tax authorities as the main parties that play a role in managing the tax system to reduce tax avoidance so that it has a significant impact on the determination of taxpayer attitudes, one of those is tax compliance (Engida and Baisa, 2014).

The Effect of Tax Audit on Taxpayer Compliance

Based on the research result, it can be seen that the third hypothesis in this research is proven, meaning that there is a significant effect of a tax audit on taxpayer compliance. The value of t-count for the tax audit variable is 3.195 with a significant level of 0.002 which is lower than 0.05 so that it can be concluded that there is a significant influence on the audit of taxpayer compliance. The results of this research support previous research conducted by Mebratu (2016) and Olatunji (2018). Thus it can be said if the tax audit conducted by the taxation authority has a significant contribution in causing taxpayers to comply with their tax obligations. If there is a higher penalty given to taxpayers, it will impact the lower taxpayer's decision to do tax avoidance.

Tax audit has an impact on tax compliance. This finding shows that tax audits play an important role to increase voluntary compliance. The frequency and accuracy of tax audits can encourage taxpayers to be more careful in completing tax returns, report all income and claim correct deductions to ensure their tax obligations. Otherwise, taxpayers who have never been subjected to tax audit have a greater desire to disobey by giving their tax reports incorrectly (Engida and Baisa, 2014). A tax audit is one of the most effective policies to protect against fraud of taxpayers. The level of tax audit can be determined by two elements, that is how many taxpayers are selected for the audit and the second is how intensive the audit is. The first element is measured easily by the number of taxpayers examined divided by the total number of taxpayers. However, the second element is very difficult to measure because there is no published information about the tax audit process. Usually, a tax audit is measured by the first element to show the level of a tax audit for practical comparison.

5. Conclusion

Based on the discussion result stated before, this research has identified: 1) there is a significant effect of tax penalties on taxpayer compliance; 2) there is a significant effect of trust in the tax authorities on taxpayer compliance, and 3) there is a significant effect of a tax audit on taxpayer compliance. In a system that prioritizes self-assessment by taxpayers on their tax calculations, tax audits can play an important role in increasing voluntary compliance from taxpayers. The tax audits that conducted carefully can encourage taxpayers to be wiser in completing their tax returns, report all income and claim appropriate reductions to ensure their tax obligations. Otherwise, unexamined taxpayers can be interested in reporting actual income and claiming the wrong amount.

The result also shows that trust in the tax authority has a significant effect on taxpayer compliance. The higher the trust of the taxpayer to the tax authorities, the more they will increase the compliance of taxpayers in fulfilling their obligations. This proves that the level of trustworthiness of taxpayers on integrity, service, consistency, and transparency shown by the tax authority affects compliance with the taxation of corporate taxpayers. Therefore, it is expected that the tax authorities can increase the mandatory trust of the agency by implementing clean governance.

Then for the last hypothesis, the results show that penalties have a significant effect on taxpayer compliance. Penalties are individual external factors that can affect taxpayer compliance. Penalties can be said to be detrimental penalties to people who break the rules, so it can be said that tax penalties are negative penalties for people who violate the rules by paying money. The general laws and regulations contain rights and obligations, actions that are permitted and not permitted by society. The existence of a law is basically to be obeyed, but for the fulfillment of compliance behavior, a penalty is required for violators, as well as for tax law. Based on the tax law there are two kinds of penalties, that are administrative penalties and criminal penalties. Administrative penalties can be kind of interest, fines, and increases, while criminal penalties can be imprisonment.

This research can contribute to providing information about the factors that can affect taxpayer compliance. The taxation authority, that is the Directorate General of Taxes, should pay more attention to penalties, trust in the tax authorities, and tax audits. Other research in the future should be able to add factors that affect taxpayer compliance besides penalties, trust in the tax authorities, and tax audit.

References

Cahyonowati, N., Ratmono, D., Faisal. (2012). "Peranan Etika, Pemeriksaan, dan Denda Pajak Untuk Meningkatkan Kepatuhan Wajib Pajak Orang Pribadi", *Jurnal Akuntansi dan Keuangan Indonesia*. Vol. 9(2), 136-153.

Bornman, M. (2015). The Determinants and Measurements of Trust in Tax Authorities as A Factor Influencing Tax Compliance Behavior. *Journal of Economic and Financial Sciences*, October, 2015, Vol. 8(3), 772-789.

Detik. (2019). "Penerimaan Pajak Kurang 109 triliun." Diakses dari https://finance.detik.com/berita-ekonomi-bisnis/d-4368566/penerimaan-pajak-kurang-rp-109-triliun-di-2018 (Akses tanggal 20 Maret 2019).

Engida, T.G., Baisa, G.A. (2014). Factors Influencing taxpayers' compliance with the tax system: An empirical study in Mekelle City, Ethiopia. *eJournal of Tax Research*. Vol. 12(2), pp.433-452.

Hantoyo, S.S., Kertahadi., Handayani., Handayani, S.R. (2016). "Pengaruh Penghindaran Pajak dan Sanksi Perpajakan Terhadap Kepatuhan Wajib Pajak (Studi Pada Wajib Pajak di Kantor Pelayanan Pajak Pratama Tegal)". *Jurnal Perpajakan (Jejak*). 2016, pp.1-7.

Kamil, N.I. (2015). "The Effect of Taxpayer Awareness, Knowledge, Tax Penalties and Tax Authorities Services on the Tax Compliance: (Survey on the Individual Taxpayer at Jabodetabek & Bandung)." *Research Journal of Finance and Accounting*, Vol. 6(2), 104-112.

Kirchler, E., Hoelzl, E., Wahl, I. (2008). "Enforced versus voluntary tax compliance: The ''slippery slope'' framework". *Journal of Economic Psychology*. Vol. 29, pp.210-225.

Mahadianto, M.Y., Astuti. (2017). "Previllage Tax Payer, Sosialisasi Pajak dan Kepercayaan Pada Otoritas Pajak Terhadap Kepatuhan". *Jurnal Kajian Akuntansi*, Vol. 1(1), pp.73-82.

Mandagi, C., Sabijono, H., Tirayoh, V. (2014). "Pengaruh Pemeriksaan Pajak Terhadap Tingkat Kepatuhan Wajib Pajak Badan Dalam Memenuhi Kewajiban Perpajakannya Pada KPP Pratama Manado". *Jurnal Emba*. Vol. 2(3), pp.1665-1674.

Mebratu, A.A. (2016). "Impact of Tax Audit on Improving Taxpayers Compliance: Empirical Evidence From Ethiopian Revenue Authority at Federal Level." *International Journal of Accounting Research*. Vol. 2(12), pp.1-19.

Mohdali. (2014). "The impact of threat of punishment on tax compliance and noncompliance attitudes in Malaysia". *Social and Behavioral Sciences*, Vol. 164, pp.291 – 297.

Olatunji, O.C., Temitope, E.A. (2018). "Effects on Tax Audit on Tax Compliance in Ekiti State, Nigeria. European Journal of Accounting, Auditing and Finance Research, Vol. 6(5), pp.13-19.

Putra, A.M., Hidayat, N. (2018). "The Influence of Tax Payer Compliance and Tax Sanction on Amnesty Tax Participation." *South East Asia Journal of Contemporary Business, Economics and Law*, Vol. 16, Issue, pp.1-9.

Ratmono, D. (2014). "Model Kepatuhan Perpajakan Sukarela: Peran Denda, Keadilan Prosedural, dan Kepercayaan Terhadap Otoritas Pajak". *Jurnal Akuntansi & Auditing Indonesia.* Vol. 18(1), 42-64.

Siamena, E., Sabijono, H., Warongan, J. (2017). "Pengaruh Sanksi Perpajakan dan Kesadaran Wajib Pajak Terhadap Kepatuhan Wajib Pajak Orang Pribadi", *Jurnal Riset Akuntansi Going Concern*. Vol. 12(2), pp.917-927.

Undang-Undang Nomor 28 Tahun 2007 tentang Perubahan Ketiga Atas UndangUndang Nomor 6 Tahun 1983 tentang Ketentuan Umum dan Tata Cara Perpajakan

Undang-Undang Republik Indonesia Nomor 36 Tahun 2008 tentang Perubahan Keempat Atas Undang-Undang Nomor 7 Tahun 1983 Pajak Penghasilan

Undang-Undang Nomor 16 Tahun 2009 tentang Perubahan atas Undang-Undang Nomor 6 Tahun 1983 tentang Ketentuan Umum dan Tata Cara Perpajakan

PeraturanMenteri Keuangan Nomor 74/PMK.03/2012 tentang Tata Cara Penetapan Wajib Pajak Dengan Kriteria Tertentu Dalam Rangka Pengembalian Pendahuluan Kelebihan Pembayaran Pajak.

Van Dijke, M., Verboon, P. (2010). "Trust in authorities as a boundary condition to procedural fairness effects on tax compliance". *Journal of Economic Psychology*, Vol. 31 (2010) 80–91.

Zemiyanti, R. (2016). "Keadilan Prosedur Dan Kepercayaan WP Terhadap Otoritas Pajak: Analisis Mediasi Kepatuhan Pajak. *Jurnal Riset Akuntansi dan Keuangan"*. Vol. 4(3), 1101-1110.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 237-246
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.83

Access to Credit and Households' Borrowing Behavior in East Africa

Josephat Lotto[1]

[1] The Institute of Finance Management, Tanzania, East Africa. Email: tathioga@yahoo.co.uk

Abstract
The primary objective of this paper is to examine how the borrowing behavior of households in the East African region are influenced by their demographic characteristics- gender, age, income and education using Tobit regression. The paper employs survey data adapted from the World Bank's 2017 Global Findex. The results show that male-headed households borrow more often than female-headed households, and that older head of households are more likely to participate in borrowing activities than their younger counterparts. Generally, the results reveal that the household whose age is relatively small should be more indebted and will have a lower level of income, and consequently fewer physical assets. This is due to the life-cycle theory which suggests that younger households have expectations of their income to rise in the future as opposed to the older households, who are heading to retirement. So, they are more willing to borrow and acquire durables and other assets due to their hopes and expectation of getting more income in the future. On the other hand, the findings reveal that the education of the head of the household is the enabling factor for the household to borrow due to the financial literacy awareness one can derive from education. The income level of the household is also considered as the determining factor of the household's borrowing likely-hood. Since borrowing requires the guarantee in terms of borrower's income, the higher the income levels of the borrower the more likely the individual will receive the loan from the lenders.
Despite household's education, age and income the results also show that the gender of the households influences the borrowing behavior of the households and that women may not have the borrowing power and ability as compared to their men counterparts. This may be due to their inability to have collateral and guarantees used as loan back-up, their poor financial education awareness, and lower business experience. Therefore, understanding households' borrowing behavior in East Africa is very important, and the results of the study may be of policy interest towards the strengthening of the East African Community financial inclusion agenda. Also, the study commends governments of the East African region to promote households' borrowing and increase opportunities for household investment in achieving intended economic growth.

Keywords: Borrowing Behaviours, Age, Gender, Income, Education, Financial Inclusion

JEL Classification: E21

1. Introduction

The last two decades have seen a tremendous increase in borrowing activities by households across the world, and this has attracted massive attention in the financial industry due to its substantial implication in the micro-economy level Andreou (2011). The households' consumption is guided by the life-cycle theory which requires households to fairly smooth their pattern of expenditures and think about what they consume in future than just focusing on their present income, Campbell, and Mankiw (1990). According to Attanasio and Browning (1995), it is the credit market which facilitates the households' consumption objective through the borrowing. According to the authors, when the household expects to receive some income in future but does not want to wait for the income to start consuming, he/she can borrow from the financial institution to start consuming the income not yet received at the cost of borrowing known as interest. The wise option is for the household who expects to receive income in future to borrow and acquire durable assets like building or motor vehicles to enjoy the services provided by such assets over time instead of saving money and accumulate amount enough to buy such asset, something which reduces lifetime expenditure.

The significant increase in household borrowing has been observed in recent time, especially in developing countries Guy Debelle (2004). According to the author, this increase is attributed to two major factors- the decline in the incidence of credit rationing following financial deregulation in most of the countries; and the fall in interest rates which is considered to be the factor for liquidity problem on households.

According to DeJuan and Seater (1999), the households' borrowing behavior is influenced by factors related to the characteristics of the households such as age, gender, income, and education. Even with the borrowing motives presented in the life-cycle theory, borrowing is also a function of fluctuation in the cost of borrowing, inflation, and changes in the business environment. If the future uncertainty is apparent households' ability to borrow is impaired because their expectation of reliable future income diminishes. Problems precipitate more during this kind of changing environment because unemployment rates increase, assets held by households reduce in value, and therefore, households may have worries of paying back their loans if they borrow during this period. Studying the factors influencing the borrowing behaviour of the households is of paramount importance because households improve the standard of their lives using loans they acquire, and this ultimately encourages the countries' economic development. Following the realization of factors governing households' desire and ability to borrow, governments have to improve borrowing environment for households to fulfill their desire.

This study, therefore, assesses the determinants of household borrowing in East Africa. The research on household borrowing behavior is widespread and biased in developed countries (e.g., Niankara and Muqattash, 2018) but very few studies have focused on the emerging markets such as East African region. Zins and Weill (2016) focused on determinants of borrowing and savings behaviours in Sub-Saharan Africa. Countries which make Sub-Saharan Africa are many in number, and diverse in a lot of aspects notably geographic diversity, which may attract significant differences in culture influencing their borrowing behaviour. East Africa is chosen because the countries composing this region are geographically close, and such geographical closeness may limit cultural differences which are pertinent in determining borrowing behaviours of households hailing from these countries. Therefore, understanding households’ borrowing behavior in East Africa is very important, and the results of the study may be of policy interest towards the strengthening of the East African Community financial inclusion agenda.

2. Related Literature

From a theoretical perspective change in loans offered to households is usually associated to both demand and supply-side factors which can not be easily isolated from each other, because factors which explain demand side of loans and those of supply are often more or less similar. As one of the key determinants of an alternative to credit, literature such as Fernando Nieto (2007) points out what is called scale variables which include; expenses, income, which stands for the concept of permanent income. According to the author, households can choose going to lending institutions to get fund for investments and consumptions when their current income level is not enough the fund their consumptions and investment activities.

Another crucial factor is the cost of obtaining loans in terms of the interest rate the lenders charge on loan to compensate them for the resulted risk accumulating from lending activity. The decrease of interest rate shoots the demand for loanable funds while reducing the supply and vice versa. When the demand becomes high, consequently, there comes what is called credit rationing as advocated by Stiglitz and Weiss (1981).

Most importantly, is the demographic and labor-market related factors which influence the borrowing behaviour of the households across countries. In effect, an increase in household debt may be affected by improvement in employment status and change in demographic arrangement for households having more likelihood of being indebted, Fernando Nieto (2007). According to the authors, as far as credit restrictions are concerned, these factors may not have a linear relation effect. Consequently, for example, a growth in employment may render a rise in household debt, not only due to the growth of their expected income level but also due to the relaxing of the restrictions on the unemployed households concerning access to the credit market.

All nations all over the world aim at their economic growth, Barro (1991). The agenda of all Governments in the world is to reduce the poverty of its people through improvement, of the level of national income, Lewis, (2013). Several people require borrowing money to solve their daily economic challenges such as buying houses, taking care of their education requirements and solving their daily needs. However, not everyone can easily borrow from financial institutions. According to Niankara and Muqattash (2018), households with no bank account who participate in borrowing activity are faced with several hindrances, but the most significant obstacles which are highlighted in their study are the high cost of financial services and lack of resources.

Sadly, in emerging economies, credit markets are unable to offer loans to poor individuals who lack collateral, something which forces the poor households to have only informal credit facilities as their only available source of finance. Unfortunately, the informal credit market punishes the borrowers by imposing higher borrowing interest rates to compensate for the risk accrued from the borrowing activity, Kochar (1997b). To add on that, Basu (1997), in the analysis of Indian rural credit market, posits that banks and other financial institutions are not willing to extend loans to poor even If they have collateral, in terms of their future harvests, because such harvests are also subject to a lot of risks.

According to Laureti (2018), worldwide about nine- percent of adults take loans from formal sources of finance while fourteen-percent are from developed economies and eight-percent are from emerging economies. Furthermore, in developed countries about fifty-percent of adults hold credit cards as a source of short-term finance while only seven-percent of adults from developing economies use this source of finance.

Regarding sources of income, in households across the region, Niankara and Muqattash (2018) identify friends and family as the most common source of new loans, except with the high-income economies.

When it comes to Sub-Saharan Africa almost 30% of the adults borrow money from friends and family while only about 2% of them use a formal source of finance such as banks and other financial institutions.

Other literature such as Lewis (2013) pin-point interest rate as a key factor which affects households' saving and borrowing behaviors. However, the households' borrowing and saving behaviours are based on their own preferences, according to Laureti (2018).

Nieto Fernando (2007) in a study of Spanish household credit behaviour recognizes real spending, gross wealth and terms of repaying outstanding loans as factors which positively drive the behaviour of household in the long run. The author also reports a negative relationship between the cost of the loan and the rate of unemployment and borrowing behaviour of the household.

Apart from these macro-economic factors, Demirgüç-Kunt et al., (2014) point out religion as one of the crucial factors which dictate the households borrowing behaviour. According to the authors, religion is regarded as one of the impediments to access to loans by Muslims because their beliefs restrict conventional borrowing. Income level of the household is also a determining factor for the borrowing behaviour of the households. According to Allen *et al.,* (2016) households with relatively enough income can participate in borrowing activities because they may have the ability to show collateral to back the loans when required to do so compared to those households in the low-income bracket.

In their study on the determinants of rural household credit activity in Vietnam, Nguyeny (2007) found uniform credit access across rural communities. The author also found a negative u-shape effect on formal borrowing. It is shown that household with higher education participates more frequently in borrowing activities compared to those with lower education.

3. Methodology

3.1. Data

The data used in this study is adapted from the World Bank's 2017 Global Findex. The Global Findex database is a survey data constructed from a survey conducted by Gallup, Inc. through comprehensive interviews with more than 150,000 people worldwide nationally representative and randomly selected respondents. A unit of analysis in this study is a household who is a civilian aged from 15 years and above. The information provided in the database is categorized by demographic characteristics of the households such as age, gender, income level, and education. The database also provides the motives of household borrowings including business motive, education motive, future old-age motive, and medical motive. In this study, the sample of East Africa is selected with about 1000 respondents in each country. The countries involved include Tanzania, Kenya, Rwanda, Uganda, Burundi, and South Sudan.

3.2. Model Specification

The analysis of the data was conducted using regression analysis. Tobit Model (Tobin 1958) was applied to analyze key factors of household borrowing in East Africa by using STATA. The choice of this model was guided by the fact that the amount of household savings and borrowing tend to be censored at the lower limit of zero (Gujarati, 2007). The Tobit model specification is given as follows;

$Yi^* = Xi\beta + \varepsilon_i$ is a given individual: 1, 2……n-- (1)

$$yi^* = \begin{cases} yi^* & if\, yi > 0 \\ 0 & if\, yi \leq 0 \end{cases} \quad \text{.......(2)}$$

Where:
yi= the observed amount of household Borrowing
Yi* = the latent variable which is not observed
β= Vector of unknown parameters
Xi = vector of independent variable affecting household borrowings
These variables are Gender, Age, income and education of the households

Therefore, the model is specified as follows;

$Yi^* = \alpha + \beta * GND_i + \sigma * AG_i + \phi * INC_i + \rho * EDU_i + \varepsilon_i$

Where:
Yi* = Household Borrowing
εi = Error term of the model
GND= Dummy taking the value of 1 for a woman household and 0 otherwise
AG= Number of years

INC= (INC_1 and INC_2); INC_1 is dummy taking a value of 1 for a household whose income lies in low (40%) quintile, zero otherwise and INC_2 is dummy taking value of 1 for a household in high-income level (60%) quintile, zero otherwise

EDU= (EDU_1 and EDU_2); EDU_1 is a dummy taking a value of 1 for a household whose education lies in low (40%) quintile, zero otherwise and EDU_2 is a dummy taking a value of 1 for a household whose education lies in high (60%) quintile, zero otherwise. To examine the association between borrowing motives and demographic characteristics the paper employed cross tabulation. This is the statistical process that gives the summary of categorical data to generate contingency tables. In this study, a comprehensive contingency table is generated for borrowing motives and demographic characteristics. The paper also used bar charts to summarize the borrowing motives across the region.

3.1 Descriptive Analysis

3.3.1 Motives for Borrowing

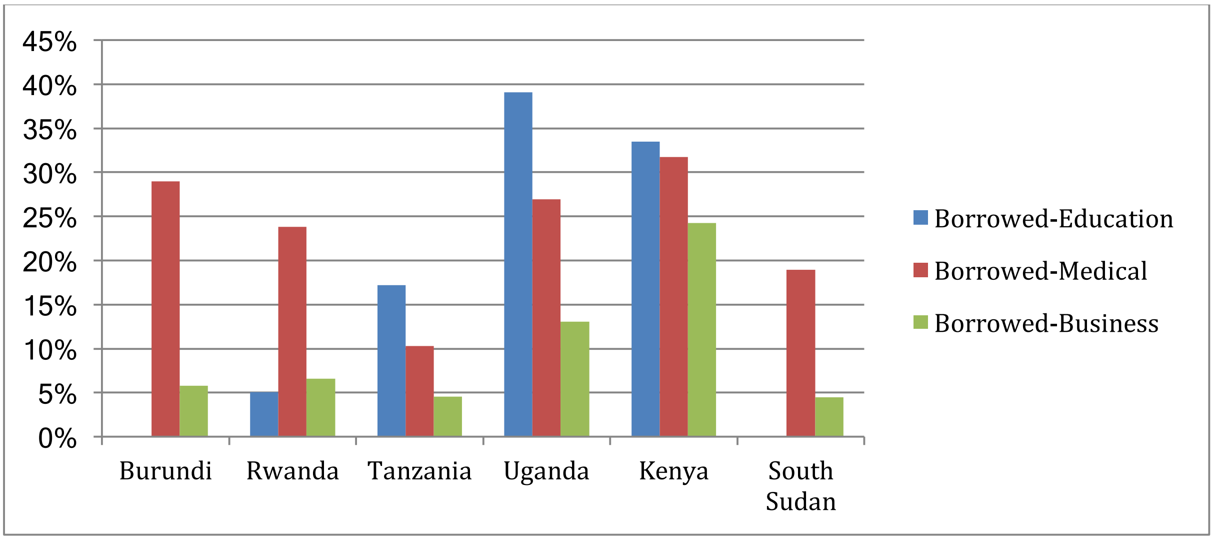
Individuals who wish to invest have two options to finance their intended investments, either they borrow, or they make upfront savings. When they make savings, they, in a way, postpone the current consumptions and when they borrow, they are obliged to repay back the loan. Global findex survey (2017) provides useful statistics to dig out the status of household borrowing and savings behavior across the world. According to the survey, worldwide, on average around 17% of the adults take loans and make savings for starting or improving their business activities. The survey extends that those who own business were more likely to report borrowing and savings for business motives than any other individuals. This confirms the research findings conducted in the USA that the savings rate of entrepreneurs is higher than the general population. Contrary to this, one would expect entrepreneurs to take more risk of borrowing for business activities, Demirguc-Kunt, (2014).

Some literature such as Okraku and Croffie (1997) argue that households depend primarily on their personal savings, and sometimes business profits, if any, for their financial needs. They have little or no access to formal external credit. Traditional financial institutions regard individual households' businesses as high risk. As a result, the financial needs of these households are not considered in the lending policy formulation of banks. Most of these individual households are denied access to financial assistance from traditional financial institutions. Therefore, they wouldn't have a choice than to turn to alternative sources of finance to cater to their financial needs. During the Global findex (2017) survey, the respondents from East Africa were asked whether they are willing to borrow if the needs arise, and results show that about 86% of the respondents said they would avoid borrowing if possible. The respondents were also asked whether they prefer saving their own money to use for business purpose or other use rather than borrowing, and about 88% of those who answered this question preferred saving money rather than borrowing. The households interviewed showed fear to borrow, and they indicated this fear when they were asked whether they would prefer delaying repaying loans when they borrow. About 94% said This has been supplemented by another question which required them to indicate the reasons why they don't want to borrow as about 81% either said they don't need to borrow (35%), they don't believe in borrowing (8%), or they fear to fail to repay the loan. Some reasons derived from this survey as to the reasons of households' reluctant to borrow include, lack of collateral, small business size and low awareness, limit of credit line etc. It is also revealed from the survey that households have a favorable attitude toward saving and investment, and a neutral (non-committal) attitude toward borrowing. The fact that they have a neutral attitude toward borrowing means that with proper incentives they are likely to borrow.

In understanding the behaviour of household borrowing, the survey asked households to tell their borrowing motives, and their response is presented in figure 1 below. In general, they identified three borrowing motives, namely; education motive, medical motive, and business motive. Figure 1 shows that the borrowing motive differs from one country to another. The highly ranked borrowing motive in Burundi, Rwanda, and South Sudan are medical while in Tanzania, Kenya and Uganda households borrow more for education purpose. Figure 1, further, shows that among all East African countries Uganda's households borrow more money for education (39%) than all other countries followed by Kenya (33%), then Tanzania (17%) and finally Rwanda (5%). Households from

Burundi and South Sudan did not borrow anything for education purpose. When it comes to borrowing for medical purpose Kenya is ranked high (32%) followed by Burundi (29%) and closely followed by Uganda (27%), and then Rwanda and South Sudan with 24% and 19% respectively of their households borrowing for medical purpose. The households in Tanzania rank last in borrowing for medical purpose. The motive which ranks the last is business motive. Figure 1 shows that Kenya is ranked higher than all other countries with 24% of its households borrowing for business purpose followed by Uganda (7%), Rwanda (6%), Burundi (5%), Tanzania (4%) and South Sudan (3%) in that order with their respective percentages in the brackets. Countries, where households borrow for the medical purpose, may be associated with poor medical insurance services.

Figure 1: Borrowing Motives



The analysis went further to categorize these motives on the basis of gender, age, income level and education level of the head of households and association between these motives with the demographic characteristics were established using cross-tabulation. Starting with gender; results presented in table 1 show that households headed by women borrow more for medical purpose in Kenya (37%), Burundi (31%) and Rwanda (26%) and those headed by men borrow more for medical purpose in Uganda (28%), South Sudan (23%) and Tanzania (11%). For comparison purpose, the education motive was not included in the contingency table because South Sudan and Burundi did not have borrowings for education.

In general, the contingency table 1 shows that across the region households borrow more for medical purpose as compared to business purpose. When it comes to business-motivated borrowing, in Tanzania, Kenya, Uganda, and Rwanda the households in which man is the head of the house borrow more as compared to households headed by women except in Burundi and South-Sudan where households headed by women record more business-motivated borrowings compared to their counterpart's male-headed households. Table 1 further shows that Kenyans' households borrow more often for business purpose than all other countries in the region regardless of the household's gender, age, income level or education followed by Uganda, Rwanda, and then Burundi in that order. The countries which borrow less for business purpose are Tanzania and South Sudan, which are almost at par when compared.

Furthermore, table 1 shows that households headed by women borrow more often for medical purpose than their male counterparts in Kenya, Rwanda, and Burundi while in Tanzania, Uganda and South Sudan men-headed households borrow for the medical purpose more often than women-headed households.

Generally, the contingency table 1 depicts the following important associations; *first,* male-headed households borrow more often for business purpose than female-headed households in four (Tanzania, Kenya, Rwanda, South Sudan) out of six countries studied in this paper. This may echo the level of women entrepreneurship in Burundi and Uganda. *Second,* the association between borrowing for business motive and age shows that older head of households borrows more frequently for business purpose than younger ones. This may be due to the facts that younger head of households still have a lot of obligations to attend such as buying home assets, building houses and other requirements before they settle to start businesses. Also, we should not forget that borrowing for business needs some larger funds requiring collateral in terms of fixed assets, which younger heads of the household may not possess.

The age of the head of household may also be an advantage to him/her because with age his/her income may be on a higher side due to more experience and probably education, hence, possessing more assets, which can back-up his/her, loan.*Third,* consistently throughout the region, those heads of households with higher income borrow more frequently for business purpose compared to households whose heads have lower income. The reason is clear because individuals with higher income will probably own more valuable fixed assets which can be pledged as collateral for loans acquisition compared to individuals whose income status is questionable.

Table 1: A Cross-tabulation of Demographic Characteristics vs Major Household Borrowing Motives

COUNTRY	*Borrowing Motive*	*Demographic Characteristics*							
		GENDER		AGE		INCOME		EDUCATION	
		Female	*Male*	*Old*	*Young*	*High*	*Low*	*>=SEC*	*<= PRM*
TANZANIA	Medical Motive	10%	11%	10%	11%	11%	9%	11%	10%
	Business Motive	4%	5%	6%	2%	6%	2%	7%	4%
KENYA	Medical Motive	37%	26%	33%	29%	31%	33%	31%	32%
	Business Motive	21%	28%	29%	15%	27%	20%	27%	22%
UGANDA	Medical Motive	26%	28%	29%	24%	28%	25%	30%	25%
	Business Motive	14%	12%	15%	10%	15%	9%	16%	11%
BURUNDI	Medical Motive	31%	27%	34%	21%	30%	28%	20%	30%
	Business Motive	7%	5%	6%	5%	6%	5%	6%	6%
RWANDA	Medical Motive	26%	22%	24%	29%	23%	25%	16%	25%
	Business Motive	6%	7%	8%	4%	8%	4%	11%	6%
SOUTH SUDAN	Medical Motive	15%	23%	20%	18%	23%	13%	32%	18%
	Business Motive	4%	5%	4%	3%	6%	3%	6%	4%

3.4 Regression Results

The determinants of the households’ borrowing behaviour were examined by focusing on the purpose for which the households borrowed money. To get this information the households were asked to indicate whether they borrowed money from any source in the last 12 months and if yes, for what purpose. Two major reasons for borrowing were captured namely, business motives and medical motives. The study then examined how these borrowing motives relate to households' demographic/individual characteristics; gender, age, income level, and education level. The Tobit regression was employed to examine how explanatory variables relate to borrowing motives of households.

The results presented in table 2 shows that, in general, borrowing motivations strongly differ from households' characteristics. Table 2 also shows that age is the only explanatory variable having similar relation with the two borrowing motives, medical and business. The relationship between households' age and borrowing motives takes a non-linear shape. The results show that the possibility of household borrowing for any purpose first increases until a certain age, then it decreases. Table 2 further shows that unlike age, other individual households' characteristics - gender, income, and education have different relations with the two loan-taking motivations of the households.

Concerning gender, table 2 shows that if a head of the household is a woman her likely-hood to borrow for business purpose decreases by 1.9% while this has got no significant impact with borrowing for medical purpose. This implies that, in East Africa, loans for business are more often requested by men than it is requested by women, but gender is not relevant in as far as borrowing for medical purpose is concerned. This finding on gender is similar to those presented by Demirguc-Kunt et al. (2014) in their study on multiple economies (64 economies) who found a significant relationship between gender and borrowing motives of the households for business purpose. The results are also in line with Asli and Klapper Leora (2013) who confirmed that women are less likely to borrow for business purpose as compared to their men counterparts. Coming to households' income results, presented in table 2, shows that income is directly related to loans taken for medical purpose both for low- and high-income levels having higher coefficient in the low-income level. This may imply that poorer households tend to borrow more frequently than those households in a higher income bracket.

However, income is also reported to be negatively related to loans taken by households for business motives. The results show that as the income level of households increases the coefficients tend to decrease as observed in table 2 (when income level is high the coefficient is 0.5% while the coefficient increases to 1.5% for households in lower income bracket). Therefore, this, generally, shows that poor households are limited to borrow money for business purpose because their income level doesn't entitle them to enough physical assets which are required by lenders to be used as collateral when they ask for loans.

Table 2, further, shows that education level of households negatively relates to borrowing motives for medical purpose and positively for business purpose. High education level is shown to have higher coefficient (3.4%) than low education level (1.7%) in the medical motive equation, while the coefficients for high and low education levels are 1.9% and 2.6% respectively, for education motive equation. This shows that as the level of households' education increases their likely-hood to borrow for medical purpose tends to diminish and that for business purpose increases. The reason for this may be since the more education ladder one climbs, the more likely is the increase in individual's income which reverts to the previous discussion that individuals with more income can easily qualify to borrow for business purpose compared to the individual in the lower income bracket. Generally, the results reported in table 2 show that the household whose age is relatively small should be more indebted and will have a lower level of income, and consequently fewer physical assets. This is due to the life-cycle theory which suggests that younger households have expectations of their income to rise in the future as opposed to the older households, who are heading to retirement. So, they are more willing to borrow and acquire durables and other assets due to their hopes and expectation of getting more income in the future.

On the other hand, the education of the head of the household is the enabling factor for the household to borrow due to the financial literacy awareness one can derive from education. The income level of the household is also considered as the determining factor of the household to borrow because borrowing requires the guarantee in terms of borrower's income. The higher the income levels of the borrower the more likely the individual will receive the loan from the lenders. Despite household's education, age and income the gender of the household matters also in as far as the borrowing behavior is concerned. Consistent to Lotto, (2018), there is a gender gap in formal financial inclusion, and that women may not have the borrowing power and ability as compared to their men counterparts. This may be due to their inability to have collateral and guarantees used as loan back-up, their poor financial education awareness, and lower business experience.

Table 2: A regression Results on Determinants of the Borrowing

Independent Variables	**Dependent Variables (Borrowing Motives)**	
	MEDICAL	**BUSINESS**
Female	-0.000 (0.0032)	-0.019**(0.012)
Age	0.0075***(0.000)	0.015***(0.001)
Age^2	-0.001***(0.0021)	0.03**(0.003)
Income – Low 40%	0.054**(0.045)	-0.015**(0.0076)
Income – High 60%	0.043***(0.0002)	-0.0051***(0.031)
Low Education	-0.017**(0.031)	0.016*(0.0011)
High Education	-0.034**(0.064)	0.029*(0.0042)
Observations	6000	5987
Pseudo R^2	0.015	0.021
Log likelihood	-17.38756	-25.9894

Predicted probability (at mean values)	0.1768	0.105

NOTE: *This table presents probit regression results of factors determining households borrowing motivations in East Africa. The top of each column shows the dependent variables which are business and medical motives while explanatory variables are gender, age, income, and education. Marginal effects are shown with stars on top while standard errors appear in brackets. * represent significant at 10% significant level, ** represent significant at 5% significant level and ****

4. A Concluding Remarks

The motive of this paper was to examine the borrowing behavior of households in the East African region and consider how the individual household characteristics affect the borrowing behavior of the head of household. The paper presents the following important results; *first,* male-headed households borrow more often for business purpose than female-headed households in four (Tanzania, Kenya, Rwanda, South Sudan) out of six countries studied in this paper. This may echo the level of women entrepreneurship in Burundi and Uganda. *Second,* the association between borrowing for business motive and age shows that older head of households borrows more frequently for business purpose than younger ones. This may be due to the facts that younger head of households still have a lot of obligations to attend such as buying home assets, building houses and other requirements before they settle to start businesses. Also, we should not forget that borrowing for business needs some larger funds requiring collateral in terms of fixed assets, which younger heads of the household may not possess.

The age of the head of household may also be an advantage to him/her because with age his/her income may be on a higher side due to more experience and probably education, hence, possessing more assets, which can back-up his/her, loan. *Third,* consistently throughout the region, those heads of households with higher income borrow more frequently for business purpose compared to households whose heads have lower income. The reason is clear because individuals with higher income will probably own more valuable fixed assets which can be pledged as collateral for loans acquisition compared to individuals whose income status is questionable.

Generally, the household whose age is relatively small should be more indebted and will have a lower level of income, and consequently fewer physical assets. This is due to the life-cycle theory which suggests that younger households have expectations of their income to rise in the future as opposed to the older households, who are heading to retirement. So, they are more willing to borrow and acquire durables and other assets due to their hopes and expectation of getting more income in the future.

On the other hand, the education of the head of the household is the enabling factor for the household to borrow due to the financial literacy awareness one can derive from education. The income level of the household is also considered as the determining factor of the household to borrow because borrowing requires the guarantee in terms of borrower's income. The higher the income levels of the borrower the more likely the individual will receive the loan from the lenders.

Despite household's education, age and income the results show that the gender of the household matters also in as far as the borrowing behavior is concerned and that women may not have the borrowing power and ability as compared to their men counterparts. This may be due to their inability to have collateral and guarantees used as loan back-up, their poor financial education awareness, and lower business experience. Therefore, understanding households' borrowing behavior in East Africa is very important, and the results of the study may be of policy interest towards the strengthening of the East African Community financial inclusion agenda.

Reference

Alexandra Zins and Laurent Weill, (2016) The determinants of financial inclusion in Africa. Review of Development Finance, 6(1), 46-57

Allen, Franklin, Elena Carletti, Robert Cull, Jun Qian, Lemma Senbet and Patricio Valanzuela. (2016) The African Financial Development and Financial Inclusion Gaps, Journal of African Economies 23, 614-42.

Attanasio, O.P. and M. Browning (1995) Consumption over the Life Cycle and over the Business Cycle. American Economic Review, 85, 5, 1118-1137.

Basu, S (1997) Why Institutional Credit Agencies are reluctant to lend to the poor: a theoretical analysis of the Indian rural credit market. World Development, 25, 2.

Browning, M. and A. Lusardi (1996) Household Saving: Micro Theories and Micro Facts. Journal of Economic Literature, 34, 1797-1855.

Campbell, J.Y. and N.G. Mankiw (1990) Permanent Income, Current Income, and Consumption. Journal of Business & Economic Statistics, 8, 3, 265-279.

Cuong H. Nguyeny (2007) Access to Credit and Borrowing Behaviour of Rural Households in a Transition Economy. International Conference on Rural Finance Research, Moving Results into Policies and Practice. FAO Headquarters Rome, Italy

DeJuan, P.J. and J.J. Seater (1999) The Permanent Income Hypothesis: Evidence from the Consumer Expenditure Survey. Journal of Monetary Economics, 43, 351-376

Demirguc-Kunt, Asli, Leora Klapper, and Douglas Randall (2014) Islamic finance and financial inclusion: Measuring the use of and demand for formal financial services among Muslim adults. Review of Middle East Economics & Finance 10(2), 177.

Demirguc-Kunt, Asli; Klapper, Leora; Singer, Dorothe; Ansar, Saniya; Hess, Jake Richard. (2018) The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution (English). Washington, D.C.: World Bank Group.

Gujarati, D.N., (2007) Basic Econometrics. Fourth edition. Mc Graw-hill, Inc., New York.

Guy Debelle, (2004). Household debt and the macro economy. BIS Quarterly Review

Josephat Lotto, (2018) Examination of the Status of Financial Inclusion and Its Determinants in Tanzania. Sustainability, 10(8), 2873

Kochar, A (1997b) An empirical investigation of rationing constraints in rural credit markets in India. Journal of Development Economics, 53, 339- 371.

Laureti, Carolina (2018) Why do poor people co-hold debt and liquid savings? The Journal of Development Studies 54(2), 213–234.

Lewis, W. A., (1954). Economic Development with Unlimited Supplies of Labor. The Manchester School. pp. 139-91.

Niankara, I.; Muqattash, R, (2018) Financial Inclusion, Saving and Borrowing Behaviors in the United Arab Emirates and the United States: A Comparative Analysis. Preprints: 2018070445 (doi: 10.20944/preprints201807.0445.v1).

Nieto, Fernando, (2007). The Determinants of Household Credit in Spain. Banco de España Research Paper No. WP-0716

Okraku, F. D. and Croffie (1997) Entrepreneurship and Small Business: Policies and Programmes in Ghana" in Fadahunsi Glu and Tunji Daodu edts. Small and Medium: Policies, Programmes, and Prospects.

Sofia N. Andreou, (2011) The Borrowing Behaviour of Households: Evidence from the Cyprus Family Cyprus. Economic Policy Review, Vol. 5, No. 2, pp. 57-83

Stigli z J. and A. Weiss, 1981 Credit rationing in markets with imperfect information. American Economic Review. 71, pp 393-410.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 247-260
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.84

Comparative Analysis of Regional Economic Growth Before and After the Village Fund Program (Case Study of the Buffer Zone of Kerinci Seblat National Park Kerinci, Indonesia)

Adi Putra[1], Zulkifli Alamsyah[2], Haryadi Kamal[3], Mohammad Syafri[4]

[1] Economic Development Program STIE Muhammadiyah Jambi, Indonesia. E-mail: putra1020057502@gmail.com
[2,3,4] Postgraduate Jambi University, Indonesia

Abstract
The availability of productive land is one of the important factors of production to encourage regional economic growth. Kerinci in Jambi Province of Indonesia is one of the regions that experienced this problem, because of the total area of Kerinci Regency covering an area of 3328.14 km², there is 59.8 percent of Kerinci Seblat National Park area which must be protected and 40.1 percent that can be managed as productive land and residential areas. Planning, strategies and optimizing the management of village funds are a form of solution to resolve these problems. Good management of village funds is expected to be able to encourage an increase in village income and regional economic growth. This paper also examines the comparative regional income, GDRP growth rate, Human Development Index, Total Poor Population and Open Unemployment Rate, especially in the buffer areas of Kerinci Seblat National Park in Kerinci, Jambi Province before and after the village fund program.

Keywords: Regional Original Income, GRDP Growth Rate, Human Development Index, Number of Poor Population and Open Unemployment Rate

1. Introduction

Regional development is an integral part of national development which is carried out based on the principle of regional autonomy, where the central government has given broad authority to the regions to be more free and flexible in determining the direction of development in their own regions in accordance with the potential, conditions, and aspirations that develop in the community. Enactment Number. 32 of 2004 concerning Regional Government, also referred to as the Regional Autonomy Law was formed with the aim that the implementation of regional government related to the implementation of regional autonomy must be truly carried out in a tangible and responsible manner.

Regional development with the principle of autonomy is a systematic and continuous effort to create conditions that can provide various legitimate development alternatives for achieving the aspirations of every citizen. Anwar,

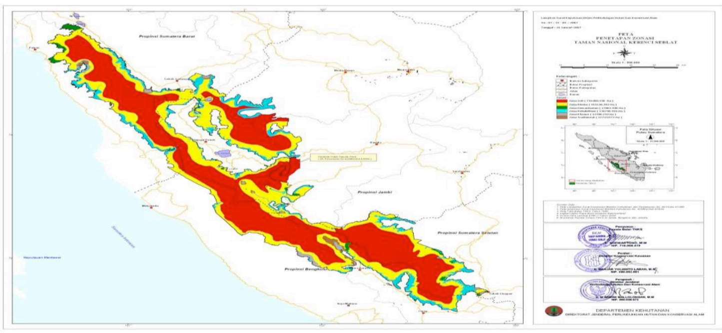
(2005) argues that regional development is carried out to achieve development goals that cover aspects of growth, equity, and sustainability which are related to the socio-economic aspects of the region.

Regional development has also undergone an evolution of change, ranging from development strategies that emphasize economic growth, then growth and employment opportunities, growth and equity, emphasis on basic needs, growth and the environment, and sustainable development. In case, every development activity must have a relationship with social, economic, cultural and environmental activities. It means that there is a construction activity that will be sacrificed and must be suffered by a community group as a consequence of such an activity, either it is a negative or positive form called externality.

One form of regional development activity that has a high externality and occurs at this time is the link between optimization of regional management, especially in areas where the area is largely included in protected areas or natural resource conservation areas. One form of regional development phenomena related to the existence of the conservation area is the existence of the Kerinci Seblat National Park and the development of the Kerinci Regency in Jambi Province.

Kerinci Seblat National Park (TNKS) was established based on Minister of Agriculture Decree Number.736 /Mentan /X/1982 then was strengthened based on Decree of the Minister of Forestry and Plantation No. 901 / kpts-II / 1999 as a conservation area. This area was also inaugurated by the UNESCO World Heritage Committee as a world natural heritage site in 2004. The TNKS area with an area of 1,484,500 hectares is located in 4 provinces, in Indonesia, that is Jambi, West Sumatra, South Sumatra, and Bengkulu Province, with Sketch zoning area as shown in 1 figure below.

Figure 1. Zoning sketch of Kerinci Seblat National Park in Four Provinces in Sumatra



Source: Appendix Director Decree General PHKA No. 07 / IV-KK / 2007

From the total area of the TNKS in the Jambi Province, an area of 635,185 hectares covers the area of Kerinci Regency 271,795 hectares (43%), Merangin District 268,980 hectares (42%), and Bungo Regency covering 94,410 hectares (15%). From the total area of Kerinci Regency covering an area of 3328.14 km², there are approximately 1990.89 km² (59.8%) constituting the area of KSNP and 1337.15 km² (40.1%) which is used for residential and productive land for agriculture and plantation.

The limitation of productive land for regional development is a major problem for improving the welfare of the community, especially those in rural areas. The Ministry of Agriculture of the Republic of Indonesia in 2017 states that there is only 33 percent of Indonesia's territory that can be used for agriculture, the remaining 67 percent is protected forest areas. The extent of the TNKS area will greatly affect the pattern of regional development and the income of the surrounding community. Therefore, it can affect the economic growth of the Kerinci Regency region. Regional development requires production factors in the form of productive land, but the productive areas are still extensive, they are included in the TNKS protected forest area.

In addition to economic phenomena, the management of Kerinci Seblat National parks is not free from problems and social complications with particular communities living in buffer zones such as the emergence of overlapping and multilayered land regulations between customary land laws. These social complications will result in the destruction of forests and the destruction of biodiversity. Kausar, 2010 suggests that stakeholders involved in social conflicts between communities and conservation areas, and forms of conflict themselves include: *First*, conflicts between global/international interests and Indonesia; *Second*, conflict between the state and the people; *Third*, conflict between the Central and Regional Governments; *Fourth*, conflicts between the Government and the People.

To avoid a greater conflict between the community and conservation areas and to preserve the environment, it is very important for the relevant parties, especially the Central, Provincial, Regency/City Governments, and related Offices to formulate appropriate programs and policies to resolve the development problems of the region. The presence of Village Autonomy and the enactment of the Law of the Republic of Indonesia No 6 of 2014 concerning Villages is expected to be a solution especially for the Village community to solve development problems that exist in their regions, because in the Law on Villages, it also provides a foundation for the Village Government such as how to organize the government independently, how to oversee development activities and how to know the rights of the community, especially the right to obtain the equal service.

The strong commitment of the central government to support the implementation of an independent Village Government is the issuance of Government Regulation Number. 60 of 2014 concerning the Village Fund, where the Government Regulation provides an opportunity for the Village Community to organize government, carry out development, organize community development and empower the Community Village. Effective Village Fund Management is also expected to be able to encourage the emergence of new Innovations and Creativity in village development so that the role of the Village Community can be put forward and returned as part of the community's right to improve their welfare.

From the explanation above, the writer is very interested in investigating (1) How is the regional economic growth before and after the Village Fund program, especially in areas that have limited productive land? 2) What are factors that can influence regional economic growth before and after the Village Fund program in areas that have limited productive land? Therefore, this research is entitled "Comparative analysis of regional economic growth before and after the Village Fund Program" (*Study in the buffer zone of Kerinci Seblat National Park in Kerinci District, Jambi-Indonesia*)

2. Theoretical Concept

2.1. Regional Development Concept.

There are several approaches and theories of development in which these theories contain a variety of social approaches that attempt to address the problem of backwardness. One form of regional development theory is uneven growth developed by Hirscham and Myrdal. The theory suggests that the development of a region is the process of formulating and implementing development goals on a supra-urban scale, where regional development is basically carried out by using natural resources optimally through local economic development in basic economic activities that occur in a region. Moreover, a region cannot develop if there is a balance, so imbalances must occur. Investment planting is not possible in every sector in an area equally, but it must be done in leading sectors which are expected to attract progress in other sectors.

Perroux which is famous for the growth polar theory also states that growth does not appear in various regions at the same time, but growth only occurs in a few places which are growth centers (poles) with different intensities (Perroux, 1988 in Mudrajat, 2002). Furthermore (Kuznets in Todaro, 2000) suggests that, at the initial stages of growth, income distribution tends to deteriorate, but in the next stage it will improve.

Indeed the development theory is closely related to development strategies, namely changes in the structure of the economy and social institutions which are sought to find consistent solutions to the problems faced, one of which is the issue of regional development, where broadly regional development is defined as an effort to formulate and apply the framework theory into economic policies and development programs in which consider aspects of the region by integrating social and environmental aspects towards achieving optimal and sustainable welfare (Nugroho and Dahuri, 2004).

In an effort to encourage regional development, an important factor is the strength of technology supported by quality human resources and research. Sukirno, (2013) explained that in the new theory of regional growth stated that an important factor in regional development is the power of technology (as an endogenous factor) and innovation as the dominant factor in regional growth (to increase productivity). High technology and innovation supported by quality human resources and research are requirements to increase regional growth. Included in the scope of the new theory is the inclusion of non-economic variables such as the following Macroeconomic Model: Regional Output = (K, L, Q, Tr, T, So), they are K (Capital / Capital / Investment), L (Labor), Q Land (resources), Tr (transportation), T (Technology) and So (Social Politics).

2.2. Village Funds and Local Revenue

Enactment No. 6 of 2014 has provided authority for villages to regulate and manage their needs, where the Village Government is given full authority to develop and set priorities for the use of it and for village development and empowerment of rural communities. Furthermore, the Government Regulation of the Republic of Indonesia No 60 the Year 2014, more specifically explains that Village Funds are sourced from the State Revenue and Expenditure Budget and will be transferred through the Regency/City Regional Revenue and Expenditure Budget, then allocated to each Village entitled to receive them in accordance with applicable regulations.

The Village Fund is part of Regional Original Income which is one of the sources of funding for development funding in the region that must be encouraged to optimize its use to increase regional income as a manifestation of the principle of decentralization. The Village Fund aims to provide flexibility to the regions and to manage village funding in the implementation of regional autonomy so that the greater the funding of development in the area of regional income also increases. So that it can provide maximum contribution to regional economic growth.

The rights, authority, and obligations that are given to the regions regarding the management of development funds are also in line with the rural development targets set out in the 2015-2019 RPJMN, where the use of Village Funds is directed at supporting the alleviation of underdeveloped villages in order to realize village independence. The use of the Village Fund is basically the right of the Village Government in accordance with the authority and priority of the needs of the local village community while continuing to prioritize the principle of justice and achievement of the village development goals annually.

2.3. The Concept of Village Funds, Economic Growth, and Community Welfare

Village income sources are not only come from Village Funds but also from Village Fund Allocation, Social Assistance and Village Original Revenue. Various village income sources would make the rotating funds in the village increase every year if it was managed properly.

The economic growth of the village is measured by the output or income level of the village community as seen from the rate of GDRP growth in each region. Tarigan, (2005) states that the economic growth of the village is the overall income increase of the community in a region as seen from the increase in value added that occurs in the region. Regional income calculations are initially made at current prices, but in order to see accruals from one period to the next, they must be expressed in real values or constant prices. Regional income also describes remuneration for production factors received by regions from available production factors such as land, capital, labor, and technology, which can also roughly describe prosperity in the area.

Growth rate Economic growth is the development of activities in the economy which causes the goods, services and prosperity increase. The process of economic progress of an area is aimed at using the level of increase in Gross Regional Domestic Product, the higher the GRDP in an area, the greater the potential source of regional revenue (Nuraini, 2017)

The success of economic development is not only seen from its growth but must be followed by an increase in the welfare of its people. If not, it can cause gaps and inequality of life in the community. In Indonesia, the concept of well-being has long been recognized where social welfare has existed in the Indonesian constitutional system contained in Article 33 of the 1945 Constitution concerning the economic system and article 34 concerning the state's concern for the weak (poor and neglected children) and social security systems. This means that social welfare is actually a platform for the economic system and social system in Indonesia (Swasono, 2004).

Enactment No 11 of 2009, states that community welfare is a condition of fulfilling the material, spiritual, and social needs of citizens in order to live properly and be able to develop themselves so that they can carry out their social functions. Wijaya, (2005) argues that community welfare is closely related to the extent of community participation in development. Community participation can be done in the form of authorization, delegation of authority or the provision of lower-level autonomy while the core of empowerment is how efforts to generate existing capabilities to achieve goals through growth, motivation, initiative, creativity, appreciation, and recognition. The Central Bureau of Statistics, stated that the measure of community welfare that is widely used by developed countries (OECD), consists of 11 indicators, namely: 1) Housing; 2) income; 3) work; 4) community; 5) education; 6) environment; 7) civic engagement; 8) health; 9) life satisfaction (life satisfaction); 10) security/safety; and 11) work-life balance.

Village Fund Management is expected to encourage improvement in community welfare, where Village Fund is also very important to measure the extent of its contribution to increasing income, health, and community education because the management of Village Funds that are good and in accordance with the potential of each village, will lead to superiority called one village one product, so that the acceleration of development in the village becomes faster. Furthermore, the Village Fund is able to encourage community development, community empowerment, increase economic growth and reduce poverty. It is caused from low living standards directly affect income, health, education, moral life, and a sense of self-esteem which are also indicators of the Human Development Index.

2.4. The Concept of Village Funds and Availability of Employment

One of the priorities of the Village Fund is the development and empowerment of village communities. Therefore, the Village Fund whose source is from the National Budget is not only prioritized for village infrastructure development but also for the empowerment of the village community. Sumpeno, (2011) explains that empowerment is an effort made by elements from outside the order of an order so that the order is able to develop an independent equivalent. Empowerment is also an effort that is intended so that an order can achieve a condition that allows it to develop itself. The Village Fund Program is an empowerment program for Village Communities that is tailored to the needs of the community itself. One of the program priorities set by the village government is to encourage the community to be more productive and creative and innovative in creating new jobs.

High population growth and limited availability of employment will result in an increase in unemployment which also encourages an increase in crime rates so that it will become a problem of development and the burden of the regional government. With the existence of a Village Fund and well managed by the Village Community, it is hoped that the Village Fund can encourage the emergence of new efforts that will contribute to job creation, reduce poverty, increase people's prosperity and reduce the imbalance in rural development.

2.5. Village Funds and Environmental Conservation

Policy instruments to solve economic and social problems in the management of conservation areas are very important, especially to overcome conflicts in conservation forest areas in accordance with the root causes. Krott in Purwawangsa, (2017) suggests several types of instruments that are often used in forestry policy analysis, including regulatory instruments, administrative instruments, economic instruments and information instruments, in economic instrument policies to achieve ideal goals and development principles, namely wise in the use of goods natural resources and calculation for each expenditure that will be carried out in such a way that the benefits from the use of the last unit of cost used are greater or at least equal to the loss of benefits from other activities due to the expenditure.

In an effort to integrate the economic interests of the community with the importance of preserving the diversity of plants and their ecosystems, especially for building and managing buffer zones outside the Nature Conservation Area, the government has issued *Enactment* No. 5 of 1990 concerning Conservation of Biological Resources and their Ecosystems. The Law provides an understanding of natural conservation areas, namely areas that have the function of protecting the life support system, preserving the diversity of plants and animals, as well as the sustainable use of biological natural resources and their ecosystems. Next Government Regulation No. 25 of 2000 concerning the Authority of the Central Government and Provincial Governments as autonomous regions in environmental management has given political recognition through the transfer of authority from the Central Government to Regional Governments with one program namely increasing the role of the community in natural resource management and preservation of environmental functions.

Bismark et.al (2007) suggest that high population growth and rapid regional development outside conservation areas have a negative effect on the function of conservation areas, so structuring regional functions need to be done primarily to increase the value and opportunities of regional use in supporting regional development activities, so that it is important the existence of economic analysis relating to benefits and costs in government investment activities. In the analysis of natural resource management which is very important to be taken into account is the amount of net benefits obtained from the management of natural resources for the welfare of society as a whole regardless of who provides these resources. Benefit-cost analysis for the use of natural resources and the environment can use the Net Present Value (NPV) method, Internal Rate of Return (IRR), and Benefit Cost Ratio (B/C Ratio). Because if in investment activities we can equate additional benefits (marginal benefits) with additional costs (marginal cost), then it means the achievement of a solution to the two problems of the allocation of maximum production factors in the natural resource extraction activities.

Munawaroh, (2011) argues that the optimization of the role of conservation areas in regional economic growth is one of the mitigation efforts to reduce pressure on the National Park itself. The root of the dominant problem is that encroachment or community activities in conservation areas existed before this conservation area was established. In addition, the expansion of national parks or conservation areas is also often carried out in areas that have been opened by the community. In this context, the government overcomes the encroachment of forest areas by making the area encroached into a conservation area. On the one hand, the level of community dependence on meeting basic needs is quite high.

Ervizal, A.Z. (2011), added that the development of an integrated national park is actually a development of the concept of national park management and anticipation of the problems faced. The emergence of the concept of integration and partnership is caused by several factors, namely:

1. There is a dichotomy between conservation versus development. Conservation is considered the opposite of development because conservation is narrowly defined, namely only protection of natural resources.
2. The emergence of conflicts between local communities and conservation areas, especially in developing countries. This conflict arises because of the loss of access of local people to natural resources that are their livelihoods, as a result of the establishment of a protected area.
3. The weight of the supervision of national parks that must be borned by the area manager or the government, especially for activities that can disrupt the integrity of the area, such as settlements, cultivation, tree felling and so on. For this reason, a large amount of funds, facilities, and labor is needed, in addition to the ability, skills and dedication of the manager.

3. Research Method

The research method used in this research is descriptive and comparative method, the data that has been obtained from research can be used to understand, solve and anticipate problems. Descriptive Research and Comparative Research, Sugiyono (2014) explains, in general, research methods are interpreted as scientific ways to obtain data with specific purposes and uses, descriptive research is research conducted to determine the existence of independent variables, either one variable or more variables (variables that stand alone) without making comparisons or looking for variable relationships with each other, whereas comparative research is research that compares the state of one or more variables in two or more different samples, or two different times.

Data collection techniques used in this study are library research that is conducted to obtain secondary research data, by reviewing theories related to research topics originating from library research sources. The sources of library research can be obtained from: books, journals, magazines, results of previous studies that have been published, and other sources (internet, newspapers, etc.) that are in accordance with the research topic.

The data analysis technique used consists of four steps, namely: data collection, data processing, data presentation, and conclusion or verification. The first steps of analysis are Univariate with frequency and percentage of each variable studied which is described in the form of Combined graph in each period and region analyzed. The second analysis is by Bivariate analysis using Independent sample T-Test and Paired T Test (parametric difference test) on two pairs of data, as a different test or comparative test.

$$t = \frac{\overline{n_1} - \overline{n_2}}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

The next analysis is SLR (Simple Linear Regression) which is also one of the Statistical Methods used in production to forecast or predict the characteristics of quality and quantity. Simple Linear Regression with a semi-log model with the aim to see the difference in activity of each tested variable in the form of the Independent variable influence on the Dependent variable with the SPSS 23 Analysis Tool, with the formula:

LogROI = $\alpha + \beta_1$GDRP-GR.
LogROI = $\alpha + \beta_2$HDI.
LogROI = $\alpha + \beta_3$LogTPP
LogROI = $\alpha + \beta_4$logOUR

Where ROI (Y) as an influencing variable while (X1) GRDP Growth Rate, (X2) HDI (Human Development Index), (X3) TPP (Total Poor Population) and (X4) OUR (Open Unemployment Rate) as Variables that are affected.

4. Findings and Discussions

4.1 Average Difference Test Results (Comparative Test)

a. Independent sample t-test.

The results of the analysis of the Independent sample T-Test, to test the average difference using SPSS. 23 by testing all the independent variables tested, the values are shown in Table 1 are as follows:

Table 1. Results of analysis of Independent sample T-Test for all independent variables tested

Variable	Value	Status	Explanation
GDRP-GR.	0,030	0,030<0,05	Different
HDI	0,158	0,158>0,05	No Different
TPP	0,242	0,242>0,05	No Different
OUR	0,239	0,239>0,05	No Different

Source : results of data processing 2018.

Table one explains that from the results of the Independent statistical test sample T-Test with a significance limit value of α = 0.05) only the GRDP growth rate variable has a value of $p < 0.05$ (0.030 <0.05) which means Ha is accepted and explains there are significant differences between the independent variables studied with the dependent variable. While the variables of HDI, TPP, OUR value of $p > 0.05$, respectively 0.158, 0.242, and 0.239 means that Ha is rejected and Ho is accepted so that there is no significant difference between the independent variables and the dependent variable.

b. Paired T test.

Results of analysis of Paired T test. The test is intended for different tests or comparative tests, by comparing whether there are differences in MEAN or the average of two groups in pairs of the same subject.

Table 2. Results of Paired Samples Analysis Correlations of research variables

Paired Samples Correlations				
		N	Correlation	Sig.
ROI	Before & After	3	.987	.103
HDI	Before & After	3	.996	.060
TPP	Before & After	3	.945	.212
GDRP-GR	Before & After	3	-.995	.065
OUR	Before & After	3	.103	.934

Source: results of data processing 2018.

Correlation value between each variable such as ROI, HDI, TPP, positive value above 0.940 illustrates a very strong and positive relationship between before and after the Village Fund Program, the GDRP-GR variable value above -0.995 also describes a strong and negative relationship before and after the Village Fund Program. The variable Open Unemployment Rate (OUR) has a positive and very small value of 10.3 percent. The level of significance of the relationship of all tested variables was <0.05, and it means that the relationship of all variables was not significant at the 0.05 level.

Table 3. Results of Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
ROI	Before & After	-239953.33	19695.36	-324695.66	-155211.00	-12.18	2	.007
HDI	Before & After	-1.78	.03	-1.94	-1.62	-48.72	2	.000
TPP	Before & After	-6466.66	3101.79	-19812.59	6879.26	-2.08	2	.172
GDRP-GR	Before & After	1.18	1.03	-3.26	5.62	1.14	2	.372
OUR	Before & After	1419.00	1084.20	-3245.95	6083.95	1.30	2	.321

Source: results of data processing 2018.

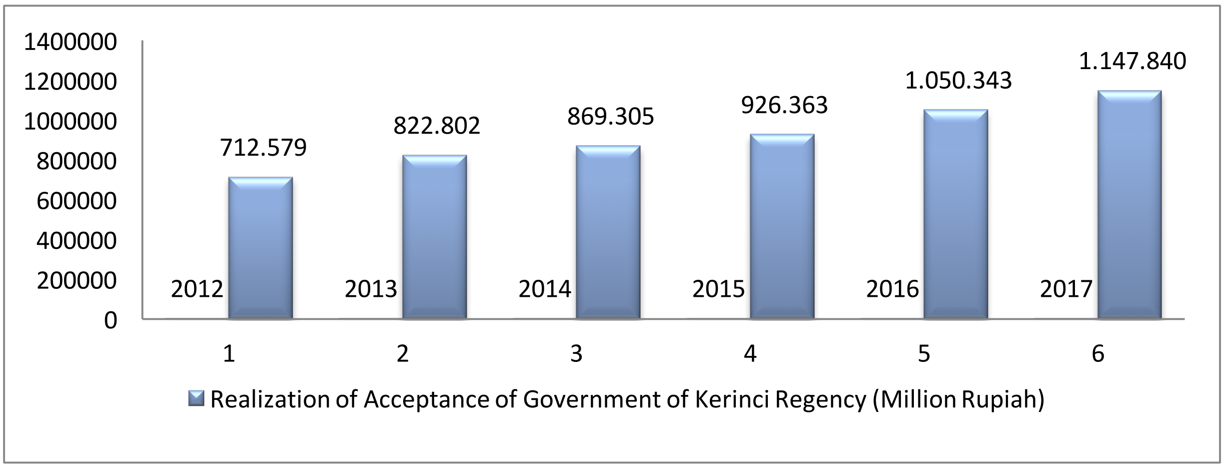
The results of the ROI and HDI analysis show Sig. (2-tailed): Probability value / p value T Paired test: The result is 0.007 and 0,000, meaning that there is a significant difference between the period before and after the Village Fund Program because the p value is> 0.05 (95% confidence). While TPP, GDRP-GR and OUR, the results are 0.172, 0.372 and 0.321 meaning that there is no significant difference between the period before and after the Village Fund Program at the 95% confidence level.

Comparative test results showed that in the period before and after the Village Fund program there were very significant differences in the ROI and HDI variables. In TPP, GDRP-GR and OUR variables, there were no significant differences in the period before and after the Village Fund program. This condition explained that in the short term the Village Fund program had not shown its contribution to community welfare and regional economic growth.

4.2 Effect of Regional Original Income on Regional Economies.

Based on data from the Jambi Provincial Statistics Office, from 2012 to 2017 the realization of the original revenue of the Kerinci Regency continued to increase from 712,579,- (million rupiahs), to become 1,147,840,- (million rupiah), with an increase of 435,261,- (million rupiah). While the average growth of Kerinci Regional Original Income the period was 10.07 percent/year. The graph of the realization of regional revenue of the Kerinci Regency government in this period is illustrated in figure 1 as follows.

Histogram 1. Realization Of Regional Revenue In Kerinci Regency, 2012-2017.



Source : BPS Statistics of Jambi Province Jambi 2018.

Histogram 1 explained that at the time before the Village Fund Program (2012-2014) the Regional Original Opinion of the Kerinci Regency had increased by an average of 10.56 percent, then in 2015-2017 after the Village Fund program, the District's Original Opinion Kerinci increased to 11.33 percent, or increased by 0.77 percent. The BPS publication showed that after the Village Fund program, the regional revenue of Kerinci Regency increased. It was caused from a portion of the regional revenue that was handed over to villages for village development.

4.3 Regional Income on the Economic Growth Rate of Kerinci

The average per capita of GRDP in Jambi Province is based on data from the Jambi Provincial Central office of Statistics from 2012 to 2017, and the highest is in Tanjung Jabung Barat Regency of Rp. 95,412 and the lowest is in Merangin district of Rp. 28,261 the average GDRP per capita of Kerinci Regency in that period was Rp. 28,767 as the second smallest after Merangin Regency.

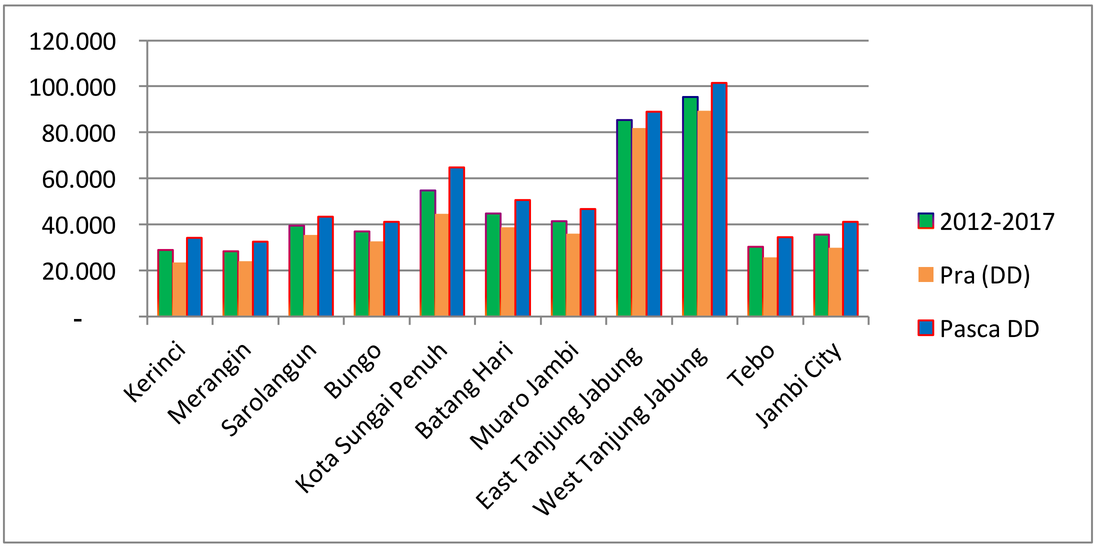
Per capita, GRDP per district in Jambi Province in (thousand rupiahs) before and after the Village Fund Program was the highest in West Tanjung Jabung Regency, the lowest before the Village Fund Program was in Kerinci District, while after the Fund Program, the lowest is in Merangin District. The average value of the regency per capita of GRDP in Jambi Province in 2012-2017 is shown in figure 2 as in the following:

Table 4. Graphs of District / City Per-Capita GRDP in Jambi Province in 2012-2017, Before the Village Fund Program and the Village Fund Program

Region	GDRP per capita on Average (thousand rupiahs)		
	2012-2017	Before (VF)	After (VF)
Kerinci	28,767	23,422	34,112
Merangin	28,261	24,059	32,463
Sarolangun	39,341	35,451	43,230
Bungo	36,784	32,553	41,015
Kota Sungai Penuh	54,689	44,657	64,720
Batang Hari	44,725	38,796	50,653
Muaro Jambi	41,255	35,908	46,601
East Tanjung Jabung	85,475	81,975	88,975
West Tanjung Jabung	95,482	89,414	101,551
Tebo	30,147	25,767	34,526
Jambi City	35,494	29,837	41,151

Source : Central office of Statistics of Jambi Province Jambi 2018.

Histogram 2. Regency/City average per-capita GRDP in Jambi Province in 2012-2017, before the Village Fund Program and already the Village Fund Program



Source: Central office of Statistics of Jambi Province Jambi 2018.

Table 4 and Histogram 2 above showed that the average per capita GRDP of Kerinci Regency before and after the Village Fund program was still very low when compared with the average per capita GRDP of regencies/cities in Jambi Province. The increase in Regional Original Income due to the Village Fund program period (2015-2018) has led to an increase in the per capita GRDP of Kerinci Regency by 45.64 Percent.

Kerinci Regency's GRDP growth rate based on ADHK in 2012-2017 is from 7.50 percent to 6.03 percent, with a fluctuating growth rate with an average of 1.14 percent/year. Kerinci Regency's GRDP-ADHK growth rate in the period 2012-2014 or before the Village Fund has increased by an average of 14.61 percent/year, but in the 2015-2017 period after the GRDP-ADHK Village Fund was disbursed by -3,06 percent/ year.

Table 5. The Effect of Regional Original Income on the Growth Rate of Kerinci Regency Gross Regional Domestic Product (GRDP-GR) in 2012-2017.

Before	After
GRDP-GR = 66,256 + 0,184ROI+ e Tsig = (0,734) R = 0,405 R Square= 0,164	GRDP-GR = 32,087 - 4,270ROI+ e Tsig= (0,615) R = 0,569 R Square= 0,323

Source : results of data processing 2018.

Table.5 explained the influence of Regional Original Income before and after the Village Fund Program on the growth rate of the Kerinci Regency. The results of the analysis showed that before and after the Village Fund Program the constant / intercept value (a) was positive at 66.256 and 32.087, this result explained that before and after the Village Fund if the Regional Income value did not change then the GRDP Growth Rate value was 66.256 and 32.087. Then the terminated coefficient (β) obtained was 0.184 and (-4.270) respectively, explaining that before the Village Fund if Regional Original Income increased by 1 percent, GRDP Growth Rate increased by 0.184 percent. After the Village Fund, Regional Original Income rises 1 Percent GRDP Growth Rate and decreased by 4,270 Percent. The significance value of T-sig (0.734 and 0.615) showed that the period before and after the Village Fund Program, the influence of Regional Income on GRDP Growth Rate in Kerinci Regency was not significant at the 95% confidence level with ($\alpha = 5\%$).

The R value of (0.405 and 0.569) showed there was no high relationship between Regional Income and Kerinci GRDP Growth Rate, while the R square value (0.614 and 0.323) explained that before the Village Fund Program the influence of Regional Original Income on Kerinci Regency GRDP Growth Rate was 16.4. The percentage is smaller than after the disbursement of the Village Fund with a value of 32.3 percent, an increase of 16.90 percent.

Increased development funds with the Village Fund program are expected to encourage changes in the development transition from Top Up (top-down) to Bottom Up so that the role of rural communities becomes greater as the spearhead of national development. Good Village Fund management starts from the planning, implementation, and accountability stages while at the same time encourages the improvement of the quality of human resources as well as production factor productivity, so that various economic potentials in the countryside will grow well, and boost regional economic growth. According to Samsubar Saleh (2003), Regional Original Income is a component that greatly determines the success or failure of the independence of the Regency/City government in the context of current regional autonomy. One component that is very much considered in determining the level of regional independence in the framework of regional autonomy is the Regional Revenue sector.

4.4 The Effect of Regional Income on Human Development Index in Kerinci

Human Development Index in Kerinci Regency from 2012-2017 continued to increase from 66.94 percent to 69.99 percent with an average growth of 0.90 percent/year, Growth in Kerinci Regency Human Development Index in the period 2012-2014 or before the existence of the Village Fund experienced was in average of 0.97 percent/year, but in the period 2015-2017 after the disbursement of Village Funds Human Development Index, it was increased by 0.94 percent/year.

Table 6. The Effect of Regional Income on Human Development Index in Kerinci

Before	After
HDI = -13,414 + 13,731ROI+ e	HDI = -18,499 + 14,615ROI+ e
Tsig = (0,102)	Tsig= (0,114)
R = 0,987	R = 0,984
R Square= 0,974	R Square= 0,968

Source : results of data processing 2018.

Table 6 explained how the Regional Original Income influenced before and after the Village Fund program for the Kerinci Regency Human Development Indeks. The results of the analysis showed that before and after the Village Fund Program, the value of the terminated coefficient (β) obtained at 13.731 and 14.615 explained that before Village Fund if Regional Original Income increased by 1 percent then Human Development Index increased by 13.731 percent, while after Village Fund when Regional Original Income increased 1 Percent Human Development Index has increased by 14,615. The significance value of T-sig (0.102 and 0.114) showed that the period before and after the Village Fund Program the influence of Regional Original Income on the Human Development Index of Kerinci Regency was not significant at the 95% confidence level with ($\alpha = 5\%$).

The R value of (0.987 and 0.984) showed there was high relationship between Regional Income and Human Development Index in Kerinci Regency, while the R square value (0.974 and 0.968) explained that before the Village Fund Program, the influence of Regional Original Income on Kerinci Regency Human Development Index was 97.4 Percent, it was greater than after the Village Fund program with a value of 96.8 percent.

The results of the study explained that before and after the Village Fund Program, the Regional Income increased and so did the number of the Human Development Index. This result was in accordance with the statement (Suparwati in Fadli. Z 2018) that Regional Income was the most important funding source to support regional financing capabilities in implementing regional autonomy. In this case, Regional Income as a measurement of own regional income is highly expected as a source of funding for improving service to the community so that the quality of the population of a region in terms of life expectancy, intellectuality, and decent living standards also increases.

4.5 The Effect of PAD on the Total Poor Population in Kerinci

Poor Population Growth in Kerinci Regency from 2012-2017 fluctuated with an average growth of 0.13 percent/year, Growth in the Number of Poor People of Kerinci Regency in the period 2012-2014 or before the Village Fund had decreased by an average of 1.37 percent/year, but in the period 2015-2017 after the disbursement of Village Funds, the Number of Poor Populations decreased by 3.99 percent/year.

Table 7. The Effect of Regional Original Income on Total Poor Population in Kerinci Regency.

Before	After
TPP = 6,165 – 0,167ROI+ e	TPP = 7,331 – 3,44ROI+ e
Tsig = (0,469)	Tsig= (0,293)
R = 0,741	R = 0,896
R Square= 0,549	R Square= 0,803

Source : results of data processing 2018.

The results of the above analysis showed that before and after the Village Fund Program the growth in the number of poor people in Kerinci Regency continued to increase (positive), then the terminated coefficient value *(β)* of each period was (-0.167) and (-3.44) explained that before and after the Village Fund Program, if the Regional Income increased by 1 percent, the number of poor people decreased from 0.167 percent to 3.44 percent. The significance value of T-sig (0.469 and 0.293) showed that the effect of Regional Income on Total Poor Population was not significant at the 95% confidence level with (α = 5%), while the relationship between the two variables was also better from 0.741 to 0.896. The R-square value of (0.974 and 0.968) explained that before the Village Fund Program the influence of Regional Income on Total Poor Population in Kerinci District was 54.9 percent. It was lower than after the Village Fund Program with a value of 80.3 percent.

This result explained that before and after the Village Fund Program, if the Regional Income increased, the Number of Poor Population decreased, this was in accordance with the function and role of Regional Income, where Regional Income was expected to be able to increase regional capital expenditure budget so that the income was more beneficial to finance expenditures, such as personnel expenditures and daily life of regional government so as to encourage people's welfare and reduce poverty.

4.6 The Effect of Regional Income on the Open Unemployment Rate in Kerinci

The open unemployment rate of Kerinci Regency from 2012-2017 had decreased from 5,163 people to 4,678 people, while its growth had a growth rate of 2.9 percent/year, the Kerinci Regency unemployment rate in the period 2012-2014 or before the existence of Village Funds experienced an increase from 5,163 people to 8,465 people, with an average growth of 12.86 percent/year. Then after the Village Fund was disbursed in the 2015-2017 period of unemployment experienced a decline from 4,891 people to 4,678 people declined in growth of 3.56 percent/year.

Table. 8 The Effect of Regional Income on Open Unemployment Rate in Kerinci

Before	After
OUR = -1,544 + 0,903ROI+ e	OUR = 5,659 – 0,328ROI+ e
Tsig = (0,777)	Tsig= (0,162)
R = 0,344	R = 0,968
R Square= 0,118	R Square= 0,937

Source : results of data processing 2018.

Table 8 The results of the analysis of the effect of Regional Original Income on the Kerinci Regency Open Unemployment Rate before and after the Village Fund Program obtained the terminated coefficient value (β) of (0.903) and (-0,328) respectively. This value explained that before Village Fund if Locally-generated revenue increased 1 percent, then Open Unemployment Rate increased 0.903 percent, while after the Village Fund

Program, if Locally-generated revenue increased 1 Percent, Open Unemployment Rate experienced a decrease of 0.328 percent. Whereas the significance value of T-sig (0.777 and 0.162), it had been shown in the two periods, the effect of Regional Original Income on the Open Unemployment Rate in Kerinci Regency was not significant at the 95% confidence level with (α = 5%).

The value of R for (0.344 and 0.968) showed that before the existence of Village Fund, the relationship between Regional Original Income and Open Unemployment Rate was low, whereas, after the existence of Village Fund, the relationship between Locally-generated revenue and Open Unemployment Rate was very high, as well as the level of influence of both.

These results explained that before the Village Fund program, if the Regional Original Income increased, the Open Unemployment Rate also increased, but after the Village Fund Program if the Regional Original Income increased, Open Unemployment Rate decreased. This condition was consistent with the research of Ni Luh Gede Cintya Adriani (2015) who argued that increasing regional income and balancing funds encourage an increase in indirect expenditure which was a budget for the welfare of society. Regional Income was managed appropriately and could be appropriately allocated by the government so that allocations through indirect expenditure would reduce the unemployment rate.

5. Conclusion

From the above findings and discussions, it could be concluded in the following.

1. Before and after the existence of the village fund, Kerinci regency increased by an average of 10.56 percent to 11.33 percent. The comparative analysis resulted in Independent sample t-test and the Paired T test. It illustrated that before and after the Village Fund program, there were very significant differences in the Locally-generated revenue and Human Development Index variables. Meanwhile, in the Total Poor Population, GRDP Growth Rate and in Open Unemployment Rate variables, there was no significant difference. This condition explained that in the short term, the Village Fund Program had not shown a large contribution to community welfare and economic growth in the Kerinci regency.
2. Original Regional Opinion Influence on GRDP Growth Rate showed that before and after Village Fund, if Locally-generated revenue increased, GRDP Growth Rate increased, with a very small increase not even significant at 95% confidence level with (α= 5%), while the effect of Locally-generated revenue on Human Development Index showed that before and after the existence of Village Fund, if the Locally-generated revenue increased, the Human Development Index also increased. The influence of Locally-generated revenue on the Total Poor Population of Kerinci Regency obtained values (β) of (-0.167) and (-3.44) explaining that before and after Village Fund if Locally-generated revenue increased, Total Poor Population decreased, while the effect of Locally-generated revenue on Open Unemployment Rate explained before Village Fund if Locally-generated revenue increased then Open Unemployment Rate conditions increased but after Village Fund if the Locally-generated revenue increased Open Unemployment Rate decreased. This result explained that the Village Fund program is very useful especially for regions with limited production factors because it is in a conservation area.

References

1) Books

Anwar, 2005 suggested that regional development was carried out to achieve development goals

Mudrajad Kuncoro, (2002), Quantitative Methods of Theory and Application for Business and Economics, First Edition, UPP Publisher AMP YPKN, Yogyakarta

Nugroho, Iwan and Rochmin Dahuri. 2004. Regional Development, Perspective. Economics, Social and Environment. LP3ES Library. Jakarta.

Sugiyono, 2014. Business Research Methods: CV Publishers. Alfabeta: Bandung

Sumpeno, Wahyudin. 2011. Integrated Village Planning. Second edition. Reinforcement Action and Development. Banda Aceh.

Swasono, 2004. Platform for economic systems and social systems in Indonesia.

Tarigan, Robinson. 2005. Regional Economy-Theory and Application of the Revised Edition. Earth Literacy. Jakarta
Todaro, Michael P, 2000. Economic Development in the Third World, Book 1 of the Seventh Edition. Jakarta: Erlangga Publisher.
Wijaya, 2005 Financial Research: Testing. Empirical ", Gramedia Main Library
Mardikanto, Totok, and Poerwoko Soebiato. 2013. Community Empowerment in the Public Policy Perspective. Bandung: Alfabeta.

2) Journals, Articles, Magazines, the Internet,

Bismark, M, and Sawitri, Reny. (2007) Regional Development and Management. Buffer of Conservation Areas. Proceeding the exposure of the results of the study
Ervizal A, Z, 2011 "Community Attitudes and Conservation An Analysis of Kedawung (Parkia Timoriana (Dc) Merr.) As a Stimulus of Medicinal Plants for the community, cases in the national park meru betiri 1) conservation media vol. xii, no. April 2007: 22 - 32.
Munawaroh. (2011). Effect of Transformational and Transactional Leadership Style on Teacher Performance. Journal of Economics and Business Th. 16 (No 2) Page 137
Ni Luh Gede Cintya Adriani, I Nyoman Mahaendra Yasa (2015) Effects of Regional Original Revenue and Balancing Funds on Unemployment Rate Through Indirect Expenditures in Districts / Cities in Bali Province Udayana University Economic Development Journal Vol.4, 11 November 2015
Nuraini, I. (2017). Quality of Regency / City Economic Growth in East Java. Journal of Economics and Business.
Samsubar, Saleh. 2003. "Ability to Borrow District and City Areas in Indonesia," Vol. XIV No. December 2, 2003, Semarang: Economic & Business Media
Purwawangsa. H, 2017 Policy Instruments to Overcome Conflict in Handian Purwawangsa Conservation Forest Areas Minutes of DOI Agricultural and Environmental Policy Vol. 4 No. 1, April 2017: 28-47 ISSN: 2355-6226 E-ISSN: 2477-0299 Department of Forest Management, Faculty of Forestry, Bogor Agricultural Institute.
Zul Fadhly, 2018. Effects of Regional Original Revenue, General Allocation Funds and Special Allocation Funds on the Human Development Index in West Sumatra Province (Pseudo Experimental Study in Accounting Students of Padang State University) Journal of the Faculty of Economics, Padang State University.

3) Regulations and Publications.

Central Statistics Agency, 2018, accessed from http://www.bps.go.id/, accessed on December 15, 2018.
Circular of the Minister of Home Affairs dated March 22, 2005 Number: 140/640 / SJ concerning Village Fund Budget Guidelines from Regency / City Governments to the Government.
Enacment Number 5 of 1990 concerning Conservation of Natural Resources and Their Ecosystems
Enacment Number 11 of 2009 concerning Social Welfare
Enacment of the Republic of Indonesia No. 32 years. 2004. and RI Law No. 33 of 2004. Regarding Regional Government and Regarding the Financial Balance between the Center and Regions, Published by CV Duta Nusindo, Jakarta.
Enacment Number 6 of 2014 concerning Villages and Village Fund management.
Enacment Number 23 Year 2014 concerning Regional Government.
Government Regulation of the Republic of Indonesia Number 60 of 2014 concerning Village Funds sourced from the State Budget.
Regulation of the Minister of Finance of the Republic of Indonesia Number 241 of 2014 concerning Implementation of Accountability for Transfers to Regions and Village Funds.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 261-272
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.85

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

Ownership Structure and Earnings Management in Indonesian Listed Banks

Arja Sadjiarto[1], Chaterine Cinthya Monica[2], Windasari Rizky Budiarti[3]

[1] Tax Accounting, Petra Christian University, Indonesia. Email: arja@petra.ac.id
[2] Tax Accounting, Petra Christian University, Indonesia. Email: chaterinemonicaa@gmail.com
[3] Tax Accounting, Petra Christian University, Indonesia. Email: windasari120197@gmail.com

Abstract
We do the study whether the ownership structure has any effect on earnings management in Indonesian listed banks during 2010-2017. Ownership structure consists of managerial, institutional, family and government ownership. Earnings management is measured using Jones modification formula by identifying the value of discretionary accruals. Since the financial ratios used in this sector are different with the ratios for other sectors, then we use two specific ratios: capital adequacy ratio and non-performing loans, together with return on assets, leverage, and size. We take samples from banking companies on the Indonesia Stock Exchange for the period 2010-2017. The analysis used in this study is the multiple linear regression analysis. The finding is that the ownership structure has a significant effect on earnings management.

Keywords: Ownership Structure, Earnings Management, Indonesian Listed Bank

1. Introduction

Earnings management is the use of policy or management discretion towards measuring accounting profits with opportunistic or specific objectives Walker (2013). Then there is management intervention in the process of preparing financial statements that are reported to external parties Fauziyah (2017). Earnings management arises as a result of agency problems due to differences of shareholders (principal) interest and the company's management (agent) interest. Agency conflict describes a conflict of interest where managers prioritize their own utility rather than maximizing the value of shares Jensen and Meckling (1976). Shareholders pursue their welfare with ever-increasing profitability, but sometimes, management is motivated to meet their personal needs by interfering the process of performance reporting so as not to reflect the true condition of the company Ningsaptiti (2010). Earnings management activities are perceived as an activity that could reduce the credibility of financial statements.

Based on the previous research, ownership structure could have effects on earnings management. Agusti & Pramesti (2009); Agustia (2013); Alves (2012); Chi-Yih Yang et al. (2008); Arifin & Destriana (2016); Sefiana (2010); Veronica & Utama (2005); Wedari (2004) investigated the influences of ownership structure and corporate governance towards earning management. According to Veronica & Utama (2005), they found that ownership structure influences positively towards earning management. Ownership structure could reduce agency conflict, hence it will reduce earnings management, although companies with a greater agency of conflict tendencies have better governance mechanisms Dey (2008).

Corporate governance is a set of regulation that rules relations among shareholders, company management, creditor parties, government, employees, and also other internal and external stakeholders related to their rights and obligations, in other words, the systems that control FCGI companies (2011). According to Iskander & Chamlou (2000), corporate governance controls are divided into two groups, they are internal dan external mechanisms. Internal mechanisms are the ways for controlling the company by using shareholders general structures and processes (RUPS), direction board compositions, commissioner board compositions and meetings to the board of director. Whereas external mechanisms are controlling the company by the ways of controlling the company and controlling markets.

Corporate governance mechanisms proxied by institutional ownership, managerial ownership, independent commissioner and auditor qualities do not influence toward earnings management Pradipta (2011) and Abdillah (2014). Whereas according to Suryani (2010), institutional ownership, managerial ownership structures, and company sizes influence negatively toward profit management. Company size influences significantly toward earnings management Aji (2012). Effendi (2013) found that company size influences positively toward earnings management, managerial share ownership influences negatively toward profit management, and institutional share ownership does not influence toward profit management.

The are various kind of ownership structure in Indonesian listed bank, whether the controlling or majority interest are government-owned, institutional-owned, managerial-owned or family owned. Most companies in Indonesia have a concentrated ownership structure, meaning that the owner of the company can sit as a board of directors or commissioners. Banks have a certain size that can be an indicator used by investors to assess assets and performance such as large banks that are relatively able to generate large profits because they have enough funds to manage. Earnings management in banks has its own uniqueness, not because of the specificity of bank accounting but includes different governance structures and ownership structures Mehran and Mollineaux (2012).

2. Literature Review

According to Cornett et al. (2005), ownership structure has a significant influence to determine company performance. The ownership structure of banks can be an incentive for owners to carry out good practices. Therefore, owners and managers must create an internal supervision framework in carrying out the operations of the company and ensure that there are no unfavorable activities. Previous studies show that government-owned banks have better performance than institutional, managerial and family-owned banks.

Agency theory is a theory that describes contractual relations between shareholders as principals and management as agents. Agency relations arise because of one or more individuals who can be referred to as shareholders (principals) who employ one or more individuals who are referred as management to do a service on behalf of the principal and authorize management to make decisions Ichsan (2013). This relationship occurs to regulate usage, control resources, and delegate decision-making authority to management as an agent.

According to Arifin and Destriana (2016), earnings management is a form of management expertise to determine profits by taking the right choice in order to achieve the desired level of profit. Earnings management is done by engineering financial statements that are carried out through opportunistic actions of managers to maximize the profits they want although, for some cases, management does not think about the impact of potential losses for shareholders. According to Scott, earnings management is often carried out by management by utilizing loopholes of accounting standards Larastomo (2016).

Corporate governance should be applied to control each corporate achieves its goals (Irma et al., 2015). The goals set by the company in order to create efficiency and effectiveness of the company's operations. Corporate governance is carried out to supervise management behavior so that the shareholders' goals are met. Since the management is the party being given the responsibility to manage the company's, then management should ensure that all processes of the company's management are in accordance with the good governance practices (Sirat, 2012). Considering the context of Indonesian bank, Indonesian central bank had published the regulation (Number 8/4/PBI/2006) about Good Corporate Governance implementations for common banks, to strengthen national banking conditions according to Indonesian Banking Architecture (API).

2.1. Hypothesis Development

The interesting concern regarding government ownership in state-owned banks is who actually holds the ownership, whether the people (taxpayers) or bureaucrats. Bureaucrats tend to maximize expenditure, including a large number of staff. This causes banks owned by the government to tend to be managed inefficiently. This lack of clarity about who owns the state bank can lead to earnings management practices Arun and Turner (2004). Ben-nasr et al. (2015), examined the quality of earnings generated by government ownership companies by using discretionary accruals (Modified Jones Model) as a measure of earnings quality and concluded that government ownership is associated with low earnings quality. Government-owned companies generally show agency problems with conflicting goals.

H1.*Government ownership has an effect on earnings management*

Institutional ownership has a function to monitor the management's performance and has a positive impact that can reduce earnings management behavior carried out by managers. Majority or controlling parties who have large ownership could monitor the agent's performance. The occurrence of fraudulent practices that benefit only to one party will be reduced. If institutional ownership does not have the ability to control management so that it cannot reduce earning management, it could be that investors do not act as sophisticated investors who have many opportunities to monitor managers to focus more on company value Subhan (2015).

H2.*Institutional ownership has an effect on earnings management*

Managerial ownership has a function to suppress opportunistic actions taken by management, by giving a portion of the bank's shares to management. According to Agusti & Pramesti (2009), management share ownership has a good purpose of aligning the interests of managers and owners so as to reduce the existence of earnings management. Managerial ownership strongly affects earnings management behavior (Sun and Rath, 2009, Agusti and Pramesti, 2009). Bank managers will be more responsible in making decisions because if the decision makes the bank suffer losses, the manager will also directly impacted.

H3.*Managerial ownership has an effect on earnings management*

Family ownership is ownership of individuals and private-owned companies (more than 5% interest), which is not a public company, state-owned company, or financial institution. Family companies often raise issues about company disclosures, especially regarding the quality of company disclosures. According to Stockmans et al. (2013), the issue of the low quality of corporate disclosures related with earnings management is due to the high level of concentration of share ownership which causes the high possibility of controlling shareholders to take over non-controlling shareholders.

H4.*Family ownership has an effect on earnings management*

3. Research Method

3.1. Samples

The populations in this study were listed bank on the Indonesia Stock Exchange (IDX) in 2010-2017. Determination of this quite long periods (8 years) is to have a complete set of data for a better description of the listed bank's dynamic changing ownership structure in Indonesia. The population is all banks listed on the Indonesia Stock Exchange, consists of 45 banks, during the period 2010-2017. So that there should be 360 data. The samples available are 344 data after excluding financial statements that are incomplete or not published on the IDX website.

3.2 Variables Operationalization

The independent variable used in this study is the ownership structure. The ownership structure has several properties such as government ownership structures, institutional ownership structures, managerial ownership structures, and family ownership structures.

1. Government Ownership Structure
   Government ownership is the amount of share ownership by the government of all share capital managed(Farooque et al., 2007).

$$Government\ ownership = \frac{The\ number\ of\ shares\ of\ the\ governmen}{tal\ outstanding\ shares} \times 100\% \quad (1)$$

2. Institutional Ownership Structure
   Institutional ownership is shareholders from institutional parties such as insurance institutions, investment companies and other institutions(Darwis, 2009). Institutional ownership in this study is domestic institutional ownership.

$$Institutional\ ownership = \frac{Number\ of\ institutional\ shares}{Total\ outstanding\ shares} \times 100\% \quad (2)$$

3. Managerial Ownership Structure
   Managerial ownership is shares owned by management in private or shares owned by subsidiaries of the company concerned and their affiliates. The indicator for measuring ownership is the percentage comparison of the number of shares held by management with all outstanding share capital (Agustia, 2013). Managerial ownership can be measured by formula:

$$Managerial\ Ownership = \left(\frac{\sum Shares\ of\ Directors\ \&\ Commissioners}{\sum Shares\ Outstanding}\right) \times 100\% \quad (3)$$

4. Family Ownership Structure
   Family ownership is ownership that leads to the founder or family members, that is an employee, or director, both individually and as a group (Villalonga et al., 2012).

$$Family\ ownership = \frac{Number\ of\ family\ shares}{Total\ outstanding\ shares}\ x\ 100\% \quad (4)$$

5. Corporate Governance
   The corporate governance mechanism is measured with proportion of the Independent Board of Commissioners divided by the total number of commissioners

$$Independent\ Commissioner\ Board\ Proportion\ \ (PDKI) = \frac{\sum PDKI}{\sum Commissioner\ Board} \quad (5)$$

These control variables had been used in previous studies since they were proven to have an effect on earnings management in banks. The control variables used in this study have been adjusted to the object of research, the following are the control variables used in this study:

1. Capital Adequacy Ratio (CAR)
   This ratio is used to protect depositors and promote the stability and efficiency of financial systems throughout the world. The bank adequacy ratio is the ratio of bank capital to regulatory risk.

$$CAR = \frac{Tier\ One\ Capital + Tier\ Two\ Capital}{Risk\ Weighted\ Assets} \quad (6)$$

2. Non-Performing Loan
   Non-Performing Loan is a sum of money borrowed by a debtor, but the debtor has not made payments in accordance with the specified period. The specified period also varies depending on the industry and type of loan. But in general, the period is 90 days or 180 days. One of the keys of the Non-Performing Loan is assessing the quality of the performance of the bank. If the non-performing loan continues to increase, it will have a negative impact on the bank, namely reducing the amount of capital owned by the bank, because the interest rate that should be the source of bank income is hampered by not receiving installments in accordance with the period that should.

3. Return on Asset (ROA)
   ROA ratio is the ratio between net income and assets. According to (Setiawati, 2010), this ratio shows the effectiveness of asset management, the higher the number, the more productive asset management is.

$$ROA = \frac{\text{Net profit before tax}}{\text{Total assets}} x\ 100\% \tag{7}$$

4. Leverage
   Leverage is the use of assets or funds that are useful for closing costs or fixed expenses of the company. In this study used financial leverage. (Riyanto 2005)in (Dewi 2010)states financial leverage is the use of funds accompanied by fixed costs.:

$$Debt\ to\ total\ assets = \frac{Total\ liabilities}{Total\ assets} \tag{8}$$

5. Size
   Size is an indicator that shows the characteristics of a company with several parameters that can be used to determine the size of the company. In this case, size is measured by total assets.

$$Size = \frac{Total\ Asset\ Bank}{Population\ Asset\ Total}\ x\ 100\% \tag{9}$$

Earnings management as the dependent variable will be calculated with a modified Jones model, with the following formula:

$$NDA_t = \propto_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right) \tag{10}$$

Where:
NDAt = non-discretionary accruals of company i in period t
α = fitted coefficients obtained from regression results in calculating total accruals
$\Delta REV_{i,t}$ = change in revenue for companies from year t.
ΔRECt = change in company receivables i from year t-1 to year t
A_{t-1} = total company assets at the end of year t-1
PPEt = company fixed assets in period t

3.3 The Model of Analysis

The analysis model used in this research uses the research model available in the research of Chi-Yih Yang et al. (2008). The model uses two independent variables, and they are ownership structure and corporate governance and one dependent variable, i.e., earning management.

$$DA_{i,t} = \beta_0 + \beta_1 (\ INS_{i,t})^2 + \beta_2 INS_{it} + \beta_3 CGOV_{it} + \beta_4 CFO_{it} + \beta_5 LEV_{it} + \ \beta_6 SIZE_{it} + \beta_7 ROA_{i,t} + \ \varepsilon_{it} \tag{11}$$

Where:
$DA_{i,t}$ = Firm i's *discretionary accruals* at year t.
$INS_{i,t}$ = Total insider holding ratio.

$CGOV_{i,t}$ = Corporate governance at year t.
$CFO_{i,t}$ = Cash flow from operation at year t.
$LEV_{i,t}$ = Financial leverage at year t.
$SIZE_{i,t}$ = Firm size at year t.
$ROA_{i,t}$ = Return on asset at year t.
$\varepsilon_{i,t}$ = Eror term.

4. Results of Analysis and Discussion

Descriptive statistical analysis was carried out to find a simple description of all the variables used as the object of research. Following are the results of processing descriptive statistical data from 344 companies sampled. Based on table 4.1, it can be seen that the Bad Credit Risk variable owned by a bank can be measured by NPL, with the average value being 1.41%, this indicates that bad credit at the sample bank is still below the provisions of Bank Indonesia regarding the NPL ratio of ≤ 5%. While bank CAR, which is a component of bank health assessment, in this study the average CAR value of the bank is 29.17%.This explains that the average bank sample in this study has CAR above the standard determined by Bank Indonesia, which is 8%.

Table 4.1 Descriptive statistics

Variable	N	Min	Max	Mean	Std, Dev
Earning Management	344	-0,02	0,00	-0,0108	0,00321
Government	344	1,19	55,88	20,6981	13,39797
Institusional	344	0,86	52,54	21,1574	13,86283
Manajerial	344	0,01	49,90	17,8939	14,07297
Family	344	0,42	87,02	24,6020	16,21418
Corporate Governance	344	0,00	3,20	0,5472	0,32110
CAR	344	0,01	4,86	0,2917	0,54069
NPL	344	1,E8	1,E13	1,41E12	2,356E12
ROA	344	-11,14	4,55	0,9165	1,80364
LEV	344	1,09	16,41	8,2612	2,77175
SIZE	344	9,33	14,07	12,2426	0,88595

To determine whether the regression coefficient obtained was valid (correct, acceptable), it is necessary to perform testing of a possible violation of the assumptions of classical. The results of classical assumptions are as follows: The normality test in this study applies to ui (residual) if the residual (ui) is normally distributed by itself all research variables used will be normally distributed. The following are the results of the residual normality test:

Table 4.2 Normality Test Results on Residuals

N	Kolmogorov-Smirnov Z	Significant	Information
344	1,289	0,072	Normal

Table 4.2 shows that the residual data distribution is fulfilling the normal distribution because the Kolmogorov-Smirnov value produced is 1,289 with a significant level of 0,072 over 5%. If the residual (ui) is normally distributed by itself the dependent variable is Earning Management (Y) and the independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) have normal distribution. So that multiple linear regression analysis can be continued.

Multicollinearity testing is done to find out that one independent variable with another independent variable in the regression is not related perfectly or is near perfect. From the presumed existence of multicollinearity, it is necessary to prove statistically the presence or absence of symptoms of multicollinearity that can be done by calculating VIF. If VIF is greater than 10, multicollinearity occurs, if it is smaller than 10, multicollinearity does not occur.

The VIF values generated by the independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) are as follows:

Table 4.3. VIF Value for Multicollinearity Testing

No	Research Variable	Tolerance	VIF	Information
1	Government (X_1)	0,842	1,188	There is no multicollinearity
2	Institutional (X_2)	0,919	1,088	There is no multicollinearity
3	Managerial (X_3)	0,913	1,096	There is no multicollinearity
4	Family (X_4)	0,901	1,110	There is no multicollinearity
5	Corporate Governance (X_5)	0,947	1,056	There is no multicollinearity
6	CAR (X_6)	0,914	1,094	There is no multicollinearity
7	NPL (X_7)	0,780	1,281	There is no multicollinearity
8	ROA (X_8)	0,788	1,269	There is no multicollinearity
9	LEV (X_9)	0,792	1,263	There is no multicollinearity
10	SIZE (X_{10})	0,604	1,655	There is no multicollinearity

Table 4.3. Shows that between independent variables does not occur multicollinearity, judging from the value of VIF on variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) which are less than 10 and tolerance values are more than 0,1.

Variants of independent variables are not constant or different for each particular value of the independent variable. In the linear regression, the residual value or absolute value of the residual cannot have a relationship with the independent variable. This can be identified by calculating the Rank Spearman correlation coefficient between unstandardized residuals and all independent variables.
The results of heteroscedasticity tests on variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) are as follows:

Table 4.4. Results of the Spearman Rank Correlation Test

No	Research variable	Spearman Rank Correlation	P-value	Information
1	Government (X_1)	0,057	0,291	There is no heteroscedasticity
2	Institutional (X_2)	-0,026	0,631	There is no heteroscedasticity
3	Managerial (X_3)	-0,029	0,598	There is no heteroscedasticity
4	Family (X_4)	-0,033	0,545	There is no heteroscedasticity
5	Corporate Governance (X_5)	-0,043	0,428	There is no heteroscedasticity
6	CAR (X_6)	-0,129	0,016	There is no heteroscedasticity
7	NPL (X_7)	0,002	0,977	There is no heteroscedasticity
8	ROA (X_8)	0,039	0,475	There is no heteroscedasticity
9	LEV (X_9)	-0,015	0,784	There is no heteroscedasticity
10	SIZE (X_{10})	-0,063	0,247	There is no heteroscedasticity

Table 4.4. Shows that between residuals with independent variables there is no heteroscedasticity, it can be seen from the significant level of Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) variables which have a p-value (sig.) of more than 5%.

Autocorrelation test to see whether there is a correlation between a period t and the previous period (t -1). In this study using the Durbin Watson test (D-W test) with the following results:

Table 4.5. Autocorrelation Test Results

Durbin-Watson
0,938

A regression model is said to have autocorrelation if the DW value is less than -2 (DW <-2), while a regression model is said to have no autocorrelation if the DW value is between -2 and +2 (-2> DW <+2), so that the model does not have autocorrelation because it has a value of 0,938.

The results of processing multiple linear regression analysis of the dependent variable are Earning Management (Y) and independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) can be seen in the table below:

Table 4.6 Equations of Multiple Linear Regressions

Independent variable	Regression coefficient
Constant	-0,011
Government (X_1)	-0,03384
Institutional (X_2)	0,04031
Managerial (X_3)	0,02836
Family (X_4)	0,03842
Corporate Governance (X_5)	0,001
CAR (X_6)	0,001
NPL (X_7)	0,01646
ROA (X_8)	0,0001
LEV (X_9)	0,05675
SIZE (X_{10})	0,0001

Based on table 4.6 above, the regression equation obtained is:
$Y=-0{,}011 - 0{,}03384X_1 + 0{,}04031X_2 + 0{,}02836X_3 + 0{,}03842X_4 + 0{,}001X_5 + 0{,}001X_6 + 0{,}01646X_7 + 0{,}0001X_8 + 0{,}05675X_9 + 0{,}0001X_{10} + e$

The results of the F test can be used to determine the compatibility of multiple linear regression models of the dependent variables namely Earning Management (Y) and the independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10). The results of the F test are as follows:

Table 4.7 F Test Results

Model	F	Sig
Regression	6,623	0,000

Table 4.7 shows that the calculated F value is 6,623 with a significant level smaller than 5% which is equal to 0,000. This means that Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) simultaneously affects Earning Management (Y). This means that the resulting regression model is appropriate to find out the effect of the independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) on the dependent variable namely Earning Management (Y).

The magnitude of the effect of the independent variables Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) to the dependent variable namely Earning Management (Y) can be seen from the value R2, namely:

Table 4.8 Results of the Multiple Linear Regression Summary Model

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,407	0,166	0,141	0,00297	0,938

a. Predictors: (Constant), SIZE, Family, Governance, Institutional, CAR, Managerial, LEV, Government, ROA, NPL

b. Dependent Variable: Y

Table 4.8 shows that the R2 value produced is 0,166, which means that the independent variables are Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) are able to explain the value of the dependent variable namely Earning Management (Y) of 16,6% and the remaining 83,4% is explained by other variables not discussed in this study.

To test the effects partially on the independent variables Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), NPL (X7), ROA (X8), LEV (X9), and SIZE (X10) on the dependent variable namely Earning Management (Y) carried out the t test.

Table 4.9 t-Test Results for Multiple Linear Regressions

Independent variable	t-count	Significant level	Conclusion
Constant	-3,832	0,000	Significant effect
Government (X_1)	-2,591	0,010	Significant effect
Institutional (X_2)	3,337	0,001	Significant effect
Managerial (X_3)	2,375	0,018	Significant effect
Family (X_4)	3,684	0,000	Significant effect
Corporate Governance (X_5)	2,107	0,036	Significant effect
CAR (X_6)	2,609	0,009	Significant effect
NPL (X_7)	2,134	0,034	Significant effect
ROA (X_8)	1,545	0,123	No effect
LEV (X_9)	0,872	0,384	No effect
SIZE (X_{10})	-1,215	0,225	No effect

Table 4.9 shows that Government (X1), Institutional (X2), Managerial (X3), Family (X4), Corporate Governance (X5), CAR (X6), and NPL (X7) variables partially effect Earning Management (Y). This is seen from the value of the calculated variable and the significant level of less than 5%. While the variables ROA (X8), LEV (X9), and SIZE (X10) partially have no effect on Earning Management (Y). This is seen from the value of the calculated variable and the significant level of more than 5%.

Based on the results of the regression model estimation, it is obtained as follows:

1. The results of this study indicate that government ownership has a negative effect on earnings management. From the results of this study, government ownership does not agree to the practice of earnings management that occurs in a company, and it shows the government has a good performance in the company. There are 7 (seven) banks in Indonesia owned by the government and the government also invests shares in several companies. Government control can be used to solve conflicts between shareholders and management.
2. The existence of institutions that have a major role in a bank can support or vice versa to management, but based on the results of this study the greater the institutional ownership in a bank will effect on earnings management at the bank. Based on the results of this study it is known that the greater institutional ownership will reduce the practice of earnings management that can be done by management. This happens because one of the functions of institutional ownership is as monitoring agents. Institutions as the largest shareholders of banks have the power to replace bank managers who commit fraud in reporting bank performance, thus causing control holders to be wrong in deciding a policy. The results of this study support the results of research conducted by (Rezai, F & Roshani, M 2012)and (Alves, S 2012) which concluded that institutional ownership has a positive effect on earnings management.

3. Hypothesis test results indicate that management ownership has an effect on bank earnings management with a positive direction of effect. Based on these findings, the more shares owned by management and bank employees will improve management behavior to use the excess information they have on reporting bank profits. This happens because when bank profits increase and the board of directors decides to distribute dividends, management with share ownership will receive dividends as much as the shares they have.

Although giving shares to management is considered as one way to reduce agency problems, it does not necessarily make management more cautious in making policies on the accounting methods applied to the banks they manage. They actually use the policy to increase bank profits so they can get dividends on shares they own. This result does not support previous research conducted by (Jensen & Meckling, 1976), (Warfield et al. 1995), (Dhaliwal et al. 1982), (Morck et al. 1988) (Cornett et al. 2006), also (Ujiyantho and Pramuka 2007)who found a negative effect on managerial ownership and earnings management. Nevertheless, the results of this study support the research (Wedari 2004)and(Boediono, 2005)found that managerial ownership has a positive effect on earnings management. Overall, the results of this study indicate that there are still agency problems with bank companies in Indonesia. One reason is the proportion of manager's ownership of the company's shares is very low from the number of company shares so that it cannot be able to unite the interests of managers and owners because managers as managers of companies do not feel they have the same interests as the owners.

4. In this study found evidence that family ownership has a positive effect on earnings management. This indicates that the higher the family ownership in the company, the better the management of profits in a family-controlled company. With a family-controlled ownership structure, it can reduce conflicts between shareholders and creditors, where creditors consider family ownership to protect creditors more.

5. Conclusion

Based on the results of the analysis and discussion, the conclusions from the results of this study are as follows:

1. Government ownership has a negative effect, but not significant on earnings management.
2. Institutional ownership has a significant effect on earnings management.
3. Managerial ownership has a positive effect, but not significant on earnings management.
4. Family ownership has a positive and significant effect on earnings management.
5. Corporate Governance variables are proven to have an effect on earnings management.
6. Capital Adequacy Ratio (CAR) has a significant effect on earnings management.
7. Non-Performing Loans (NPL) has a significant effect on earnings management.
8. Return on Assets (ROA), Size, Leverage, does not have an effect on earnings management

References

Abdillah, Abie. (2014). *Pengaruh Kualitas Audit, Komite Audit dan Corporate Governance terhadap Manajemen Laba (studi empiris pada perusahaan perbankan yang terdaftar di BEI pada tahun 2009-2012)*. (Published mini thesis, Fakultas Pendidikan Ekonomi dan Bisnis Universitas Pendidikan Indonesia). Retrieved from http://repository.upi.edu/11283/

Agusti, Restu & Tyas, Pramesti. (2009). Pengaruh Asimetri Informasi, Ukuran Perusahaan, Kepemilikan Manajerial Terhadap Manajemen Laba. *Jurnal Ekonomi*, *Vol.17* No.1.

Agustia, Dian. (2013). Pengaruh Faktor Good Corporate Governance, Free Cash Flow, dan Leverage Terhadap Manajemen Laba. *Jurnal Akuntansi dan Keuangan*, *Vol.15* No.1, 27-42. doi:10.9744/jak.15.1.27-42

Aji, Bimo Bayu. (2012). *Pengarug Corporate Governance Terhadap Manajemen Laba Pada Perusahaan Manufaktur di Bursa Efek Indonesia*. (Published mini thesis, Universitas Diponegoro,Semarang.

Alves, Sandra. (2012). Ownership Structure and Earnings Management: Evidence from Portugal. *Australasian Accounting, Business and Finance Journal*, *Vol.6*(1), 57-74.

Arifin, Lavenia & Nicken, Destriana. (2016). Pengaruh Firm Size, Corporate Governance, dan Karakteristik Perusahaan Terhadap Manajemen Laba. *Jurnal Bisnis dan Akuntansi*, *Vol.18* No.1, 84-93.

Arun, T.G. & J.D., Turner. (2004). Corporate Governance of Banks in Developing Economies: concepts and issues. *Corporate Governance An International Review, 12*(3), 371-377. doi: https://doi.org/10.1111/j.1467-8683.2004.00378.x

Ben-nasr, H., Boubakri, N., & Cosset, J. (2015). Earnings quality in privatized firms : The role of state and foreign owners. *Journal of Accounting and Public Policy*, *34*(4), 392–416. https://doi.org/10.1016/j.jaccpubpol.2014.12.003

Boediono, Gideon SB. (2005). Kualitas Laba: Studi Pengaruh Mekanisme Corporate Governance dan Dampak Manajemen Laba dengan Menggunakan Analisis Jalur. *Simposium Nasional Akuntansi, 8.* Solo.

Chi-Yih Yang, Hung-Neng Lai, Boon Leing Tan. (2008). Managerial Ownership Structure and Earnings Management. *Journal of Financial Reporting and Accounting, 6*(1), 35-53. doi:https://doi.org/10.1108/19852510880000634

Cornett, Marcia Millon, Alan, J. Marcus, & Hassan, Tehranian. (2006). Corporate governance and pay-for-performance: The impact of earnings management. *Journal of Financial Economics, 87,* 357-373. doi:10.1016/j.jfineco.2007.03.003

Darwis, Herman. (2009). Corporate Governance Terhadap Kinerja Perusahaan. *Journal of Finance and Banking, 13* No.3.

Dewi, Diastiti Okkarisma. (2010). *Pengaruh Jenis Usaha, Ukuran Perusahaan dan Financial Leverage Terhadap Tindakan Perataan Laba pada Perusahaan yang Terdaftar di Bursa Efek Indonesia (Studi Empiris di BEI)*, (Published mini thesis Universitas Diponegoro, Semarang).

Dey, Aiyesha. (2008). Corporate Governance and Agency Conflicts. *Journal of Accounting Research, Vol.46*(5). https://doi.org/10.1111/j.1475-679X.2008.00301.x

Dhaliwal, Dan S., Gerald L., Salamon, & E. Dan, Smith. (1982). The Effect of Owner Versus Management Control on the Choice of Accounting Methods. *Journal of Accounting and Economics, 4*(1), 41-53. doi:https://doi.org/10.1016/0165-4101(82)90005-2

Effendi, Sofyan & Daljono. (2013). Pengaruh Corporate Governance dan Kualitas Auditor Terhadap Manajemen Laba. *Diponegoro Journal of Accounting, 2* No.3.

Farooque, Omar Al, Tony, Van Zijl, & Keitha, Dunstan & AKM, Waresul Karim. (2007). Corporate Governance in Bangladesh: Link between Ownership and Financial Performance. *Journal Compiltaion, 15* No.6.

Fauziyah, Nuriyatun. (2017). *Pengaruh Good Corporate Governance dan Leverage Aktivitas Riil pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2010-2012*. (Published mini thesis Universitas Negeri Yogyakarta).

FCGI. (2011). Retrieved from *Forum for Corporate Governance in Indonesia*: http://www.fegi.or.id/corporate-governance/about-good-corporate-governance.html

Ichsan. (2013). *Teori Keagenan (Agency Theory)*. Retrieved from (https://bungrandhy.wordpress.com/2013/01/12/teori-keagenan-agency-theory/)

Irma, Yeni, Noorina, Hartati & Ali, Muktiyanto. (2015). The effect of good corporate governance mechanism to firm's performance (empirical study of manufacturing firms listed on IDX). *Journal of Applied Business and Economic Research (IJABER) 13*(7), 4849-4866.

Iskander, Magdi R., & Naderch, Chamlou. (2000). *Corporate Governance: A Framework for Implementation*. (Public Disclosure The International Bank for Reconstruction and Development, The World Bank Group).

Jensen, C., & Meckling, H. (1976). Theory of The Firm : Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics 3*, 305-360.

Larastomo, J., H.D. Perdana, H. Triatmoko, & E.A. Sudaryono. (2016). Pengaruh tata kelola perusahaan dan penghindaran pajak terhadap manajemen laba pada perusahaan manufaktur di Indonesia. *Jurnal Bisnis dan Manajemen 6*(1), 63 – 74

Mehran, H., & Mollineaux, L. (2012). Corporate Governance of Financial Institutions. (Published by Federal Reserve Bank of New York Staff Reports) .

Morck, Randall, Andrei, Shleifer, & Robert W, Vishny (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics 20*. 293-315

Ningsaptiti, Restie. (2010). *Analisis Pengaruh Ukuran Perusahaan dan Mekanisme Corporate Governance terhadap Manajemen Laba*. (Published mini thesis Universitas Diponegoro, Semarang).

Pradipta, Arya. (2011). Analisa Pengaruh dan Mekanisme Corporate Governance Terhadap Manajemen Laba. *Jurnal Bisnis dan Akuntansi, 13* No.2, 93-106.

Rezai, F & Roshani, M. (2012). Efficient or Opportunistic Earnings Management with Rewards to the Role of Firm Size and Corporate Governance Practices. *Interdisciplinary Journal of Contemporary Research in Business, 3*, 1312-1322.

Riyanto. (2005). Efisiensi Pasar Modal di Bursa Efek Jakarta. *Jurnal Ekonomi STEI No.1/Th.XI/19/Januari-Maret*, 24-36.

Sefiana, Eka. (2010). Pengaruh Penerapan Corporate Governance Terhadap Manajemen Laba pada Perusahaan Perbankan yang telah Go Public di BEI. *Jurnal Ekonomi Bisnis & Akuntansi Ventera Vol.12* No.3. Desember. 221-222.

Sirat, Hadi. (2012). Corporate Governance Practices, Share Ownership Structure, and Size on Earning Management. *Journal of Economics, Business, and Accountancy Ventura 15*(1), 145 – 156

Setiawati, Koosrini. (2010). *Pengaruh Rasio CAMEL Terhadap Praktik Manajemen Laba di Bank Umum Syariah*.(Published mini thesis Universitas Diponegoro, Semarang).

Stockmans, A., Lybaert, N., & Voordeckers, W. (2013). The Conditional Nature of Board Characteristics in Constraining Earnings Management in Private Family Firms. *Journal of Family Business Strategy*, *4*(2), 84–92. https://doi.org/10.1016/j.jfbs.2013.01.001

Subhan. (2015). *Pengaruh Good Corporate Governance dan Leverage Terhadap Manajemen Laba pada Perusahaan Manufaktur di Bursa Efek Indonesia*. (Published mini thesis Sekolah Tinggi Ilmu Ekonomi Perbanas, Surabaya).

Sun, L., & Rath, S. (2009). An Empirical Analysis of Earnings Management in Australia. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering 3*(7), 1682–1698.

Suryani, Indra Dewi. (2010). *Pengaruh Mekanisme Corporate Governance Dan Ukuran Perusahaan Terhadap Manajemen Laba Pada Perusahaan Manufaktur Yang Terdaftar Di BEI*. (Published mini thesis Universitas Diponegoro, Semarang).

Ujiyantho dan Pramuka. (2007). Mekanisme Corporate Governance, Manajemen Laba dan Kinerja Keuangan (studi pada perusahaan go public sektor manufaktur). *Jurnal Simposium Nasional Akuntansi X*.

Veronica, Dr. Sylvia N.P. Siregar. Dan Utama, Dr. Siddharta. (2005). Pengaruh Struktur Kepemilikan, Ukuran Perusahaan, dan Praktek Corporate Governance Terhadap Pengelolaan Laba (Earnings Management). *Simposium Nasional Akuntansi*. *Solo.*

Villalonga, B., Amit, R.,. (2012). How do Family Ownership, Control, and Management Affect Firm Value ?. *Journal of Financial Economics 80*. 385–417. https://doi.org/10.1016/j.jfineco.2004.12.005

Walker, M. (2013). How Far Can We Trust Earnings Numbers ? What Research Tells Us About Earnings Management. *Journal Accounting and Business Research Vol.43* No.4, 445–481. https://doi.org/10.1080/00014788.2013.785823

Warfield et al. (1995). Managerial Ownership, Accounting Choices, and Informativeness of Earnings. *Journal of Accounting and Economics Vol.20*(1), 61-91. https://doi.org/10.1016/0165-4101(94)00393-J

Wedari. (2004). Analisis Pengaruh Proporsi Dewan Komisaris dan Keberadaan Komite Audit Terhadap Aktivitas Manajemen Laba. *Simposium Nasional Akuntansi 7*. *Denpasar.*

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 273-280
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.86

Balancing Between Work and Life: Determinants and Dynamics

Asif Imtiaz[1], Md. Mobarak Hossain[2]

[1] Lecturer (Economics), Department of Management Information Systems, Faculty of Business Studies, University of Dhaka, Dhaka, Bangladesh
[2] Department of Management Information Systems, Faculty of Business Studies, University of Dhaka, Dhaka, Bangladesh

Corresponding Author: Asif Imtiaz, Lecturer (Economics), Department of Management Information Systems, Faculty of Business Studies, University of Dhaka, Dhaka – 1000, Bangladesh. Tel: +880-1628-759566, E-mail: asifimtiaz.mis@du.ac.bd

Abstract
Thumping a perfect balance between professional and personal life is necessary for upholding the standard of life. The purpose of this study is to discover the determinants those can significantly predict the extent of work-life balance. A sample of 293 workers ranging from 35 years of age to 45 years of age, was analyzed using factor analysis and multiple linear regression. Three latent constructs, i.e. "Organizational Support," "Managing Workers through Benevolence" and "Regularity and Flexibility of Working Hours" were extracted among which the last two constructs have a positive association with the extent of work-life balance while the other construct having no significant relationship. Females compared to males, have less control in balancing work and life, indicating gender divide in this sphere. These findings might be handy for the employing authorities, either public or private.

Keywords: Work-Life Balance, Organizational Support, Benevolence, Working Hours

1. Introduction

Work-life balance is essential for individuals' well-being, organizations' performance, and a functioning society (Darcy et al., 2012). In the present time, there has been a growing curiosity in the work-life interface in the human resource management literature regarding the source and the effect of the dispute between two spheres (Singh, 2013). It examines the concept of balance and its impact on the relationship between work and the rest of the life (Guest, 2002). Work-life balance emphasizes proper prioritization between professional work and personal lifestyle (En.wikipedia.org, 2017). Krassner (1958) said that anthropologist used a concept of happiness that is to have as little difference as possible between work and play. The concept work-life balance first used in the UK in the late 1970s to explain the balance between professional and personal life. In the United States, this phrase was first used in 1986 (Kanthisree, 2013). Research shows that maintaining work-life balance has always reflected social, economic, and workplace development (Lewis et al., 2007). Work-life balance has been framed up having the realization of making lives better for its employees, which in turn supports their individual growth as well as the improvement of the company. If an employee retains a good balance between profession and personal life, he or she produces a better outcome than the outcome would have been produced without a sustainable work-life balance. Thus it is beneficial for the organization to make an effective work-life balance policy (Clark, 2001;

Goodstein, 1994). Work-life balance can be influenced by demographical factors such as age, gender because these factors indicate the level of energy, ability to work and how keen the employee is to work (O'laughlin et al., 2005). There has been a growing tendency of participation of women in the workplace (Tennant & Sperry, 2003). The greater participation of women along with men in the labor sector requests a better work-life balance among employees (Guest, 2002), though, realizing the fact that the challenges faced from the work and family life found to have some negative impacts on the well-being of employees and their families (Hochschild, 1997), they are given flexible working hours, extended job security which helps them to make a balance between household activities and professional work (Scandura & Lankau, 1997). Research shows that the married women work fewer hours than married men and there is a significant difference between them in allocating time among professional work, domestic work and leisure over the life cycle (Fine-Davis et al., 2004). Younger and better-educated people may also perceive more work-life imbalance since they could be loaded with more work-pressure due to their level of energy and efficiency. Stress caused by excessive workload causes family-work conflicts and work-family conflicts (Hyman et al., 2003). However, some other factors like social, economic, organizational, and perceived control of work schedules impact on work-life balance (Keene & Quadagno, 2004; Hill et al., 2001). Higher levels of schedule control, since schedule control improves work-life balance, it might be more important to bind the unbinding working hours than altering working schedule (Tausig & Fenwick, 2001).

Work-life balance is about having a proper balance and control over when, where, and how to work. It increases effectiveness as well as satisfaction in both personal and professional life. The main success of any organization depends on the effectiveness of the employees, but the employees' effectiveness depends on the proper balance between personal and professional life. (Parvin & Kabir, 2011). The employers emphasized the topic and recognized that work-life balance is necessary in order to get the output efficiently from the employees because efficient output and a healthy work-life balance have a strong association (Hafeez & Akbar, 2015). To get an optimized output, one prerequisite is to have an effective motivation of employees in workplace (Bansal & Sharma, 2012) and an influencing motivation (Hall et al., 2013) leading the combination of two personal variables i.e. tendency to approach success and tendency to avoid failure (Atkinson & Feather, 1966) and those will be effective for deriving the satisfaction of employees (Singh, 2013). Work-life imbalance causes a depression that results in decreased productivity and higher absenteeism (Layous et al., 2011). Low level of work-life balance can cause employees to experience low morale, higher absenteeism, experiencing high turnover, and very poorer work quality (Seligman, 2011). Hill and his colleagues (2008) found that work-life balance policies are the keys to reduce stress, turnover, and absenteeism while exerting a positive impact on the employee's job satisfaction, productivity, and retention. McCarthy and his colleagues (2008) gave emphasis on the importance to implement proper work-life initiatives. These initiatives include flexible working hours, financial facilities, childcare facilities, counseling.

Research finds that there are many barriers to implement strategies relevant to work-life balance; although some achievements have made over the years, still some of the challenges are remaining (De Cieri et al., 2005). This particular study focuses on finding the dynamics of the extent of work-life balance of the workers from age slab 35-45. We chose this age group because from the past experience of the researchers, they came across the common perception that employees from this age-bracket have the highest probability to get engaged in both professional and family life. Thus, they must go through the path of balancing work and personal life. Therefore, we set the following objectives:

- To explore and establish the latent constructs working behind the movement of work-life balance of the employees in either way.
- To examine the effects of those latent constructs and demographic traits on the extent of the work-life balance of the employees.

2. Materials and Methods

2.1 Research Setting

A cross-sectional study was designed based on a pool of employees aged between 35 to 45 years. This particular age group was selected because of the common and valid perception which assumes peoples of that age are immensely engaged in both professional and household activities those are needed to be optimized to maintain a good work-life associated with a healthy familial and social life. 'Convenience Sampling Method' was chosen as the sampling strategy since this is a non-probabilistic sampling strategy which rivets samples being picked from that part of the population which is close to hand (Ritchie, Lewis & Elam, 2003). Our sample consisted of workers from both the public and private sector. They were informed of the purpose of the study and were provided with a consent form. They were neither involved in the process of development of the research design nor built any research item used in this study. But they were aware of the fact that the result of this study might be available to them upon request.

2.2 Instrumentation

A structured questionnaire was used as the research instrument by which the data were collected. The questionnaire was divided into two parts. First part contains demographic information as in gender and age while the second part contains self-developed questions which are inspired by and modified from the studies of Geurts et al., (2005); Greenblatt (2002); Thomas and Ganster (1995); Wayne, Randel and Stevens (2006); Voydanoff (2004) and Hill et al., (2001). In total, 302 questionnaires were sent to the participants through the internet. 9 participants were excluded due to null response and incomplete response. The ultimate cohort consisted of 293 employees (Male = 255, Female = 38) of different organizations aged from 35 to 45 [Mean = 38.94; (SD = 2.91)] on whom all the analyses were carried out.

2.3 *Measurement*

Data on self-developed items which are shown in Table 1 were collected using a five-point Likert scale ranging from (1) "Strongly Disagree" to (5) "Strongly Agree" indicating the level of agreement associated with each statement. We used the composite score derived from the level of agreement from the statements "You are satisfied with the working hours and as it fits with your private life" and "Your present way of life gives balance to your work" as the score representing the extent of work-life balance (out of 10). We recoded the information gathered on participants' gender as "Male = 1" and "Female = 0".

Table 1. Independent variables and definition

Items	***Definition***
Prsnl1	Work stress creates diseases like hypertension, diabetes, etc.
Prsnl2	Your company arranges events like a holiday camp, picnic to help to manage work and personal life.
Org1	Work-life balance policy in the organization should be customized to individual needs.
Org2	Your organization takes the initiative to manage the work-life balance of its employees.
Org3	Work-life balance leads to significant improvement in absenteeism
SocioEcon1	In house facilities of organization support work-life balance.
SocioEcon2	Your company offers available financial services to support your family.
SocioEcon3	You miss out quality time with your family because of the pressure of work.
SocioEcon4	Your company organizes social functions which are suitable for you and your families.
Time1	You need not to stay in the office for long hours or overnight and even on holidays, thereby don't feel depressed about your life.
Time2	Flexible working hours provided by the company due to their adoption of Work Life Management Policy is at a satisfactory level.

2.4 Statistical Analyses

We executed an Exploratory Factor Analysis to "identify the fewest possible constructs needed to reproduce the original data" (Gorsuch, 1995). Osborne and Costello (2005) noted, "The aim of factor analysis is to reveal any latent variables that cause the manifest variables to covary." After completing the factor analysis, we ran a multiple linear regression taking the extent of work-life balance as the dependent variable depending on the factor score coefficients of the extracted factors, age, and gender.

$$\text{Work-life balance} = B_0 + B_1\,(\text{Age}) + B_2\,(\text{Gender}) + B_i\,(\text{Extracted Factor Score Coefficients}); \quad (1)$$

$$\text{Where, }_{i} = 3\ldots.n$$

The exploratory factor analysis was done by using SPSS 16.0, and multiple linear regression analysis was performed using STATA/IC 13.0.

3. Results

3.1 Exploratory Factor Analysis

The Bartlett test of sphericity came out significant (χ^2_{55} = 246.048, P = 0.00) indicating the factorability of the correlation matrix. The value from Kaiser-Meyer-Olkin (KMO) test was 0.633, which meant factor analysis was appropriate since there was sampling adequacy relative to the items developed (Malhotra & Dash, 2008). Based on the initial eigenvalues, we found that there are four factors those are associated with eigenvalue greater than 1.0. Those four factors accounted for around 53% of the total variances. Thus, four factors were extracted at the first stage.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.633
Bartlett's Test of Sphericity	Approx. Chi-Square	246.048
	df	55
	Sig.	.000

Table 3. Eigenvalues

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.127	19.333	19.333
2	1.310	11.910	31.242
3	1.227	11.157	42.399
4	1.133	10.300	52.699
5	.955	8.683	61.382
6	.892	8.108	69.490
7	.805	7.322	76.812
8	.738	6.709	83.520
9	.663	6.030	89.550
10	.635	5.776	95.326
11	.514	4.674	100.000

Table 4. Rotated Component Matrix

	Component			
	1	2	3	4
Prsnl1	-.341	.220	.506	.443
Prsnl2	.481	.235	.123	.338
Org1	-.022	.642	.101	-.061
Org2	.659	.218	-.124	-.022
Org3	.102	.744	-.099	.091
SocioEcon1	.095	.574	.211	-.054
SocioEcon2	.532	.073	.601	.008
SocioEcon3	.105	.103	.797	-.114
SocioEcon4	.667	-.130	.199	.037
Time1	-.038	-.089	.071	.711
Time2	.216	-.006	-.239	.653

After analyzing the rotated component matrix, we eliminated three cross-loading items (Prsnl1, Prsnl2, and SocioEcon2) and again repeated the procedure. As expected, the Bartlett test of sphericity was significant even at 1% level of significance ($\chi^2_{28} = 91.44$, $P = 0.00$) and the results of Kaiser-Meyer-Olkin (KMO) test (0.564) was upper than the cut-off value 0.5. Three factors were extracted because their respective eigenvalue were greater than 1.0.

Table 5: Rotated component matrix after offloading 3 variables those crossload

	Component		
	1	2	3
Org1	.649	.080	-.079
Org2	.143	.615	.098
Org3	.707	.110	.176
SocioEcon1	.659	-.028	-.094
SocioEcon3	.238	.457	-.451
SocioEcon4	-.094	.821	.087
Time1	-.003	.076	.550
Time2	.035	.079	.795

One item (SocioEcon3) cross-loaded again with more than one factor and thus dropped from the analysis. We reiterated the procedure one more time, and the Bartlett test of Sphericity ($\chi^2_{21} = 67.43$, $P = 0.00$) and value of KMO test (0.566) was satisfactory, again. Three factors or construct were extracted because of having eigenvalue more than 1.0, respectively. No cross-loading item was found, and we reached our destination finally.

Table 6: Rotated component matrix after omitting SocioEcon3

	Component		
	1	2	3
Org1	.668	.022	-.018
Org2	.166	.733	-.055
Org3	.700	.175	.097
SocioEcon1	.664	-.053	-.070
SocioEcon4	-.066	.794	.105
Time1	-.003	-.088	.756
Time2	-.003	.140	.742

Latent construct 1 is associated with 3 items (Org1, Org3, and SocioEcon1). Construct 2 is correlated with two items, such that Org2 and SocioEcon4. The final construct is having a correspondence with two items, which are Time1 and Time2. We named the latent construct 1 as "Organizational Support." We did so because customization of work-life balance policy by recognizing individual needs, work-life balance lessens absenteeism and in-house facilities enhance work-life balance have high loadings on this. Organizational initiatives to manage employees' work-life balance and making arrangements of social functions for workers' families have high factor loadings on the second construct, and therefore we can portray it as "Managing Workers through Benevolence." Absence of depression due to not so prolonged working hours more than regular hours at office and derivability of satisfaction due to flexible working hours have factor loadings more than 0.3 on the third construct and we labeled it as "Regularity and Flexibility of Working Hours."

3.2 Multiple Linear Regression

A multiple linear regression set up the fact that “Managing Workers through Benevolence”, “Regularity and Flexibility of Working Hours” and Gender could statistically significantly forecast the extent of work-life balance with $F(5, 287) = 14.62$, $P = 0.00$ and these three variables could explain 20.3% variability in the degree of work-life balance of the workers. The greater the practice of the organization in managing workers through benevolence, the higher the composite score for the extent of work-life balance ($\beta = 0.67$, $P = 0.00$) controlling for other variables. The same relationship was found true when it came to the point of regularity and flexibility of working hours ($\beta = 0.37$, $P = 0.00$) set par. One astonishing fact came out as we observed the relationship of work-life balance and gender that was females were reported to be more off-balance than males ($\beta = -0.58$, $P = 0.00$). The other variables were statistically insignificant, even at 10% level.

Table 7: Result of Multiple Linear Regression

Satisfaction Level	Coefficient	Standard Error	t	P> | t |	95% Confidence Interval	
Gender Bin	-0.577	0.300	-1.92	0.056*	-1.169	0.014
FactorCoeff1	0.006	0.099	0.06	0.954	-0.190	0.201
FactorCoeff2	0.670	0.101	6.58	0.000**	0.469	0.871
FactorCoeff3	0.373	0.099	3.74	0.000**	0.177	0.570
Age	0.03	0.034	1.06	0.289	-0.031	0.105
Constant	5.596	1.393	4.01	0.000**	2.852	8.340

Note: $R^2 = 0.2030$; $F (5, 287) = 14.62$**; * $P < 0.10$; ** $P < 0.000$

4. Discussion and Conclusion

Nowadays, it has been argued that achieving a balance between home and professional life is increasingly getting a priority for many people (Sturges & Guest, 2004). Work-life balance can impinge on the standard of life, job satisfaction, work stress, turnover absenteeism, and competitive environment (Singh, 2013). Lower family satisfaction can decrease working performance, decrease productivity, can cause higher absenteeism and poorer working quality; while higher satisfaction can draw better working performance (Forgeard et al., 2011).

Policies sensitive to employee's individual needs and in house facilities of an organization can together affect the work-life balance this organizational support leads to the improvement of absenteeism. Organizational initiative to manage the work-life balance of the employees and arrangement of social functions for families of the employees make works enjoyable and things easier to manage. This benevolent way to manage the workers bears good fruit for the organization, also. Maximum employees staying long hours in the office or overnight even on holiday negatively affect the mind of employees so the organization should fix the time limit so that the employees can spend their quality time with their family and friends (Lobel, 1991). But the employees should be given more and more flexible working hours to make them satisfied and make a good work-life balance policy.

As found in the earlier studies, females compared to males are troubled more in terms of balancing professional life and personal life. One reason might be that they have to carry out the household chores and in most cases, they didn't get appropriate support from their counterparts. The long tradition of hiring housemaids are not much in action these days because of everlasting growth in RMG sector, which went against getting a bit of relief in household activities for women. Age has nothing to do with the work-life balance. Managing workers through benevolence is very important as well as the regularity and flexibility of working hours to determine the extent of work-life balance. This is relatable because workers expect that their authorities will understand that they too have families and personal life. Steps of the authorities to ensure enough family time makes workers happily engaged in their works. Regularity and flexibility of working hours responsive to the needs of employees create a breathing space for the employees and reduce the risk of being laid off because of shirking even for any valid reason.

Work-life balance is about having a proper balance between personal life and professional life. This study took people of age starting from 35 to 45 as the sample regardless of their employer authority- public or private. After doing subsequent factor analyses, three constructs were extracted successfully, which are "Organizational Support," "Managing Workers through Benevolence" and "Regularity and Flexibility of Working Hours." Among those, "Organizational Support" was found to have an insignificant association with the extent of work-life balance. Rest of the constructs significantly explained the reason for variation in the extent of work-life balance. Females were less in control with respect to balancing working life and personal life. Age was not a matter of significance in explaining work-life balance. This result may change if the age-slab sledges in either way. Future research could be directed in such a way where sample cohort will consist of working range population from a wide range of districts.

References

Atkinson, J.W. and Feather, N.T. eds., 1966. A theory of achievement motivation (Vol. 66). New York: Wiley.

Bansal, I. and Sharma, R., 2012. Achievement Motivation of Managers in Relation to Their Gender: A Study with Specific Reference to ONGC. Asian Journal of Research in Business Economics and Management, 2(6), pp.243-250.

Clark, S.C., 2001. Work cultures and work/family balance. Journal of Vocational Behavior, 58(3), pp.348-365.

Darcy, C., McCarthy, A., Hill, J., and Grady, G., 2012. Work-life balance: One size fits all? An exploratory analysis of the differential effects of career stage. European Management Journal, 30(2), pp.111-120.

De Cieri, H., Holmes, B., Abbott, J., and Pettit, T., 2005. Achievements and challenges for work/life balance strategies in Australian organizations. The International Journal of Human Resource Management, 16(1), pp.90-103.

En.wikipedia.org. (2017). Work–life balance. [online] Available at: https://en.wikipedia.org/wiki/ Work%E2%80%93life balance[Accessed 16 Aug. 2017].

Fine-Davis, M., Fagnani, J., Giovannini, D., Højgaard, L., and Clarke, H., 2004. Fathers and Mothers: dilemmas of the work-life balance: a comparative study in four European countries (Vol. 21). Springer Science & Business Media.

Forgeard, M.J., Jayawickreme, E., Kern, M.L., and Seligman, M.E., 2011. Doing the right thing: Measuring wellbeing for public policy. International Journal of Wellbeing, 1(1).

Geurts, S.A., Taris, T.W., Kompier, M.A., Dikkers, J.S., Van Hooff, M.L. and Kinnunen, U.M., 2005.Work-home interaction from a work psychological perspective: Development and validation of a new questionnaire, the SWING. Work & Stress, 19(4), pp.319-339.

Goodstein, J.D., 1994. Institutional pressures and strategic responsiveness: Employer involvement in work-family issues. Academy of Management journal, 37(2), pp.350-382.

Goodstein, J.D., 1994. Institutional pressures and strategic responsiveness: Employer involvement in work-family issues. Academy of Management journal, 37(2), pp.350-382.

Greenblatt, E., 2002. Work/life balance: Wisdom or whining. Organizational Dynamics, 31(2), pp.177-193.
Guest, D.E., 2002. Perspectives on the study of work-life balance. Social Science Information, 41(2), pp.255-279.
Hafeez, U., and Akbar, W., 2015. Impact of work-life balance on job satisfaction among school teachers of 21st Century. Australian Journal of Business and Management Research, 4(11), pp.25-37.
Hall, D. T., Kossek, E. E., Briscoe, J. P., Pichler, S., & Lee, M. D. (2013). Nonwork orientations relative to career: A multidimensional measure. Journal of Vocational Behavior, 83(3), 539–550.
Hill, E.J., Grzywacz, J.G., Allen, S., Blanchard, V.L., Matz-Costa, C., Shulkin, S., and Pitt-Catsouphes, M., 2008. Defining and conceptualizing workplace flexibility. Community, Work, and Family, 11(2), pp.149-163.
Hill, E.J., Hawkins, A.J., Ferris, M., and Weitzman, M., 2001. Finding an extra day a week: The positive influence of perceived job flexibility on work and family life balance. Family relations, 50(1), pp.49-58.
Hochschild, A., 1997. The time bind. WorkingUSA, 1(2), pp.21-29.
Hyman, J., Baldry, C., Scholarios, D., and Bunzel, D., 2003. Work–life imbalance in call centres and software development. British Journal of Industrial Relations, 41(2), pp.215-239.
Kanthisree, G., 2013. Work life balance of employees: a study on selected public and private sector undertakings.
Keene, J.R., and Quadagno, J., 2004. Predictors of perceived work-family balance: Gender difference or gender similarity? Sociological Perspectives, 47(1), pp.1-23.
Krassner, P., 1958. How a Satirical Editor Became a Yippie Conspirator in Ten Easy Years. Putnam.
Layous, K., Chancellor, J., Lyubomirsky, S., Wang, L., and Doraiswamy, P.M., 2011. Delivering happiness: Translating positive psychology intervention research for treating major and minor depressive disorders. The Journal of Alternative and Complementary Medicine, 17(8), pp.675-683.
Lewis, S., Gambles, R., and Rapoport, R., 2007. The constraints of a 'work–life balance' approach: An international perspective. The International Journal of Human Resource Management, 18(3), pp.360-373.
Lobel, S.A., 1991. Allocation of investment in work and family roles: Alternative theories and implications for research. Academy of Management Review, 16(3), pp.507-521.
McCarthy, A., Cleveland, J.N., Hunter, S., Darcy, C., and Grady, G., 2013. Employee work–life balance outcomes in Ireland: a multilevel investigation of supervisory support and perceived organizational support. The International Journal of Human Resource Management, 24(6), pp.1257-1276.
O'laughlin, E.M., and Bischoff, L.G., 2005. Balancing parenthood and academia: Work/family stress as influenced by gender and tenure status. Journal of Family Issues, 26(1), pp.79-106.
Parvin, M.M., and Kabir, M.N., 2011. Factors affecting employee job satisfaction of pharmaceutical sector. Australian journal of business and management research, 1(9), p.113.
Ritchie J, Lewis J, Elam, G. Designing and selecting samples. Qualitative research practice: a guide for social science students and researchers. 2003; p.77–108.
Scandura, T.A., and Lankau, M.J., 1997. Relationships of gender, family responsibility, and flexible work hours to organizational commitment and job satisfaction. Journal of organizational Behavior, pp.377-391.
Seligman, M.E., 2011. Learned optimism: How to change your mind and your life. Vintage.
Singh, S., 2013. Work life balance: A literature review. Global Journal of Commerce & Management Perspective, 2(3), pp.84-91.
Sturges, J., and Guest, D., 2004. Working to live or living to work? Work/life balance early in the career. Human Resource Management Journal, 14(4), pp.5-20.
Tausig, M., and Fenwick, R., 2001. Unbinding time: Alternate work schedules and work-life balance. Journal of family and economic issues, 22(2), pp.101-119.
Tennant, G.P., and Sperry, L., 2003. Work-family balance: Counseling strategies to optimize health. The Family Journal, 11(4), pp.404-408.
Thomas, L.T., and Ganster, D.C., 1995. Impact of family-supportive work variables on work-family conflict and strain: A control perspective. Journal of applied psychology, 80(1), p.6.
Voydanoff, P., 2004. The effects of work demands and resources on work□to□family conflict and facilitation. Journal of Marriage and family, 66(2), pp.398-412.

Wayne, J.H., Randel, A.E., and Stevens, J., 2006. The role of identity and work–family support in work–family enrichment and its work-related consequences. Journal of vocational behavior, 69(3), pp.445-461.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 281-289
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.87

Research on the Proportion of Underground Economy in China Based on NIPA Measurement

Yusu Qin[1], Zican Ren[1], Xuefan Wang[2]

[1] School of Commerce and Social Studies, Chongqing University of Science and Technology, Chongqing, China
[2] School of Civil Engineering and Architecture, Chongqing University of Science and Technology, Chongqing, China

Corresponding Author: Yusu Qin, School of Commerce and Social Studies, Chongqing University of Science and Technology, Chongqing, 401331, China. Tel: +861512390714. E-mail: qyusu@yahoo.com

Abstract
William White, in his book The Street Society deeply analyzes the unique social functions of illegal groups in the Clairville community. This social result based on interaction networks causes the illegal economy to attach it and nourish it. The Chinese society, which also has a network that emphasizes interaction, has a huge underground economy that affects our understanding of actual economic data. This paper provides a macro estimate of the proportion of China's underground economy to GDP in China and its regions through the NIPA (National Income and Products Account) assessment method for countries with economies in transition. The results show that the proportion of China's underground economy continues to rise, but the growth rate is declining year by year. The overall proportion is not high, but the regional differences are obvious. Individual provinces, municipalities, autonomous regions have shown a unique trend and need to be treated differently

Keywords: Underground Economy, Interaction Theory, NIPA Measurement

1. Introduction

In 1936, William White joined a field investigation in an Italian immigration area in Boston. He used the participatory observation method to observe and record the living conditions of the slum, the informal organizational structure and behavior, the relationship between these organizations and other social groups, and the interaction patterns between them, summarized the society of this corner community. The structure and interaction methods finally extracted the book Street Corner Society, which was published in 1943 and received wide attention. This book has a lot of highlights. One of them is that it has got rid of the research paradigm of community research in the past, focusing on the specific individuals and groups(Shilu, 1995). In the book, the "harmony" between illegal groups and police groups is a typical embodiment. By depicting the wine business during the toasting period and using gambling for profit in the illegal group, White made us fully understand that the illegal groups in the corner society seem to have become the towering tree that maintains the ecological balance of the Clavier region. Its roots penetrate this Italian Deep in the soil of the community, and there is almost every street corner gang; his branches are lush, covering the sky, the police are their "accomplice" so that their illegal activities are guaranteed. However, it is not to say that the police and the illegal groups are in the same group. White believes that "the relationship between them is not general, but it is built between individuals in these two groups." Officials never and what form of contract is reached in the illegal group, the "intervention" of the police is only the obedience to this social structure. They protect the stability of the area in the form of street corner society. White pointed out: "The observations made on the form of Clavier show that the primary function of the police department is not to enforce the law but to manage illegal activities. The people of Clavier have established an organization that can be permanent. There is freedom that depends on the law"(White, 1994),the party in the illegal group, like the police's "blessing policy", sees that illegal activities that should be banned actually play their social functions, illegal groups in East City District provide local people with Employment opportunities, investment for startups, promotion of production and employment, and social mobility of local residents.

White used the theory of interaction to explain this pattern of activity. He believes that the pattern of activity in street corners is fixed. Street corner youths and community residents rely on the rules of illegal groups. Illegal groups follow the "business" concept of responsibility to residents. Even the police had to act in the manner of Clavier to keep the police in contact with illegal gangs. This approach is stable and fixed by the long-term activity of the group. If a corner youth wants to make himself feel spiritually happy, he must maintain his interaction. He needs to make his activities follow the customary channels, otherwise, he will be upset(Defeng & Mei, 2002). This model clearly reveals the extraordinary role of the illegal economy in the economic life of local communities. We can understand this informal economic activity as an economy in a network. It is in this corner of the youth, clubs, illegal groups, and police, politicians, etc. as "nodes," "density" in other community networks, the informal economy is "embedded" Social system. In this kind of informal trading, the development of Granovetter's "embedded dilemma" appears, that is, the only means to prevent dereliction of duty is the trust between ordinary members in the dominant social structure. The trust in informal transactions comes from the common identity and emotions and the desire to punish the scammers. He is excluded from his social network. This kind of punishment of forcible social exclusion, from the perspective of the flow of economic resources, is more deterrent than other punishments (Granovetter, 1985). Is China, also a strong networked society, like the corner society, the owner "embedded" with the underground economy in the social system? If he is ubiquitous, how much does he constitute our economic life?

2. Concepts

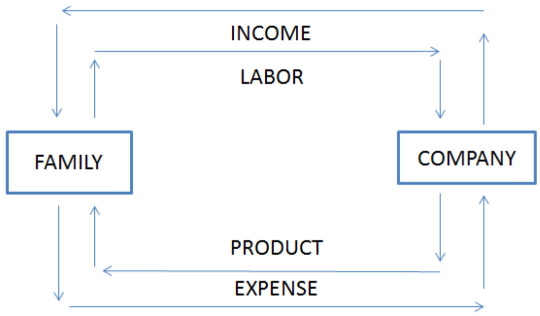
The underground economy was first proposed by the Southern European Economics Giorgio in 1997. It refers to the fact that the government failed to manage the taxation and implementation control due to various factors, the output value was not included in the part of the government's published gross national product. Economic activity, Feige later classified him more systematically based on institutional regulations that were violated by specific economic actions and dividing them into the illegal economy, undisclosed economy, unregistered economic behavior, and informal economic behavior. "Illegal economy refers to that goods and services which prohibited by the law of production and sales. The undisclosed economy has composed the act of "avoiding the legal regulations clearly stipulated in the tax law." Unregistered economic behavior refers to avoiding the reporting requirements of the government statistical department. And informal economic behavior refers to actions taken to save the costs of 'property relations, financial registration, labor contracts, infringement, business and social security systems' covered by laws and regulations (Feige, 1990)."

3. Measurements

3.1 Measurement Methods

At present, there are mainly physical estimation methods, investigation methods, and currency estimation methods for the measurement methods of the underground economy. The physical method of the underground economy refers to the use of some physical, economic variables that play an important role in daily economic activities to speculate on the scale of the underground economy. Internationally, the power consumption method is relatively popular. This method was first called "simple electric consumption models" (ECM), which assumes that electricity consumption can reflect the best indicator of overall economic activity because of the usual assumptions. It is believed that the elasticity of electricity consumption to GDP is generally equal to 1, which means that the growth of power consumption is synchronized with the growth of the overall economy. The total amount of electricity is estimated, the amount of underground economy is eliminated by excluding the officially recorded economic volume in the population (Kaufmann, Kaliberda, & World Bank. Europe and Central Asia Region. Country Department IV., 1996). However, this method only uses electricity as an evaluation index, and there is a general tendency to underestimate the size of the underground economy (Harriss-White, 2010). The underground economy survey method refers to estimating the underground economy through census or questionnaire sampling surveys and specific non-sampling surveys. The typical example is the household consumption assessment method. James Smith and his assistant McCrohan used the national possibility survey under the guidance of UMich to study the informal goods and food provided by the family (Smith, 1987). This study considers the family the informality of supply is an effective indicator for estimating the proportion of the informal economy, but it is regarded as providing formal services for large companies and non-conforming labor activities contained within large companies (Williams & Martinez-Perez, 2014). The currency estimation method is the earliest use of systematic and rigorous data to study the beginning of the underground economy because of its succinct procedures and data acquisition. It is also relatively convenient, so the method has been widely used at home and abroad (Yongxing, 2009). The representative is the general cash ratio model (GCR), which is based on the circulation of money that needs to be stored. On the basis of the ratio, it is assumed that informal transactions are mainly carried out in cash to avoid penalties from regulatory oversight bodies (Gutmann, 1977). This method is more applicable in developed countries, where the government registration department and the national finance department are more developed because of the investigation. It is more effective with statistically applicable indicators such as currency flow and savings rate. (Map 3-1)

Map 3-1 BASIC ECONOMIC MODLE



Between them, this article selects the NIPA measurement method. NIPA (National Income and Products Account) is a macroeconomic estimate, known as the macro-differentiation method, which attempts to measure the proportion of all underground economies in the gross national product. This approach is based on the existence of two different but comparable measurement methods that measure a certain area of the national economy. This difference is attributed to underground economic activity, and this approach is very practical and developing countries in transition. In 2008, Feige used the unobserved proportion of national income and GDP as an indicator to measure the size of the underground economy of the former Soviet Union and Eastern European countries. This approach was found to be applicable to developing countries in transition (Feige & Urban, 2008). This paper uses the same measurement ideas to try to estimate the scale of China's underground economy in the post-communist system in transition (Nee & Opper, 2010).

3.2 Data selection and statistical calculation

From the point of view of macroeconomic operations, the most basic national economic model is a single input and a single output economy. Figure 3-1 shows all the economic transactions that take place between homes and businesses in this economy. The inner ring represents the flow of labor and products; the family sells their labor to the enterprise, and the enterprise sells its own products to the family. The outer ring represents the corresponding currency circulation, the family pays the money to the enterprise for the purchase of the product, and the enterprise pays the family wages and profits. In this economy, GDP is both the total expenditure on products and the total income of manufactured products. Therefore, the GDP calculated by both the expenditure method and the income method must be equal. Because according to accounting, the purchaser's product expenditure must be equal to the income of these product sellers (Mankiw, 2011). Therefore, in the macroeconomic model, income, expenditure must be equal, and the difference, in reality, we can classify it as the share of the underground economy, because people always tend to conceal income rather than an expenditure. Estimate the difference between "During Urban Residents' Per Capita Income" (DPI) and "Urban Residents' Per Capita Consumption Level" as the total income of underground economic activities. We can estimate the share of China's underground economy in GDP.

4. Results and analysis

From a national perspective, the proportion of the underground economy in GDP increased from 0 to 2005 in the eight years from 2005 to 2012. In 2012, it increased by 1.06 percentage points compared with 2005. (Table 4-1) From the data of each year, the growth rate in 2012 was the highest, rising by 1.07 percentage points, and the negative growth in 11 years and 10 years, the proportions decreased by 0.27% and 1.39% respectively. (Table 4-2) However, on the whole, from the beginning of 2007, the increase in the proportion has been decreasing year by year. According to other studies in Asia, the shrinkage is related to the global financial crisis that began in 2007 (Hasan & Mohammad, 2015).On a month-on-month basis, China's underground economy's share of GDP is not as high as the countries in transition. According to the 2003 United Nations Economic Commission for Europe survey on the underground economy of FSU (former Soviet Union countries) and CEE (Eastern European countries) in 1998-2000, the proportion of countries in 2000 was [48%, 9%]. Among them, Moldova in Georgia and Romania is more than 30%, and Kyrgyzstan is 50% after all.

Table 4-1. Underground economic proportion

Region	Year							
	2012	2011	2010	2009	2008	2007	2006	2005
Northeast	4.21%	3.64%	3.79%	5.57%	6.25%	7.55%	8.25%	5.84%
North China	6.04%	5.18%	5.37%	6.73%	6.46%	5.44%	5.65%	5.32%
East China	8.42%	6.77%	7.08%	7.00%	6.73%	7.30%	6.38%	6.61%
Central China	11.11%	8.89%	9.63%	13.66%	12.67%	11.09%	9.41%	8.09%
South China	10.18%	9.21%	9.03%	9.62%	9.15%	8.37%	9.17%	9.63%
Southwest China	14.79%	13.81%	13.96%	14.96%	15.76%	16.71%	14.63%	12.08%
northwest	6.12%	6.52%	7.16%	10.89%	10.01%	9.23%	8.83%	7.28%
Total	8.21%	7.14%	7.41%	8.80%	8.54%	8.32%	7.85%	7.15%

Data from the National Bureau of Statistics of China

Table 4-2. Underground economic proportion

Area	Year							
	2012	2011	2010	2009	2008	2007	2006	2005
Northeast	4.21%	3.64%	3.79%	5.57%	6.25%	7.55%	8.25%	5.84%
North China	6.04%	5.18%	5.37%	6.73%	6.46%	5.44%	5.65%	5.32%
East China	8.42%	6.77%	7.08%	7.00%	6.73%	7.30%	6.38%	6.61%
Central China	11.11%	8.89%	9.63%	13.66%	12.67%	11.09%	9.41%	8.09%
South China	10.18%	9.21%	9.03%	9.62%	9.15%	8.37%	9.17%	9.63%
Southwest China	14.79%	13.81%	13.96%	14.96%	15.76%	16.71%	14.63%	12.08%
northwest	6.12%	6.52%	7.16%	10.89%	10.01%	9.23%	8.83%	7.28%
Add up	8.21%	7.14%	7.41%	8.80%	8.54%	8.32%	7.85%	7.15%

Data from the National Bureau of Statistics of China

However, less than 10% of the countries have only Croatia and the Czech Republic (Nations, 2003). Therefore, in general, China's underground economy has increased between 2005 and 12 years, but the increase has shown a downward trend, and its proportion of GDP is not high compared with international data.

From the perspective of various regions of the country, from 2005 to 2012, the underground economy of the northeastern region of China's six major regions has decreased, and the other five regions have risen. (See Figure 4-1, Table 4-1, Table 4-2) The growth rate in Central China was the most obvious, rising by 3.02%. The southwest and east China, respectively, rose by 2.71% and 1.81% as a fellow. The northwest region continued to rise by 1.65 percentage points before 2010 and began to decline in 10 years, down 4.77 percentage points, and the proportion was compressed to 6.12%. In terms of the proportion of the underground economy in GDP in various regions, the proportion of the underground economy in the southwest region is relatively high, and it has maintained the first place in the past eight years. In 2012, the underground economy accounted for 14.79% of GDP. The lowest proportion is still in the northeast. The decline in the proportion from the beginning of 2006 makes its proportion of the underground economy in 2012 only account for 4.12% of GDP. Generally speaking, consistent with the national data, the proportion of the underground economy in most regions has risen to varying degrees, and the regions with weak economic bases such as Central and Southwest have seen a large increase. The proportion of the underground economy in various regions also appears to be high in the south (14.79% in the southwest in 2012 and 10.18% in southern China). The situation is low in the north (4.21% in the northeast, 6.04% in the north, and 6.12% in the northwest).

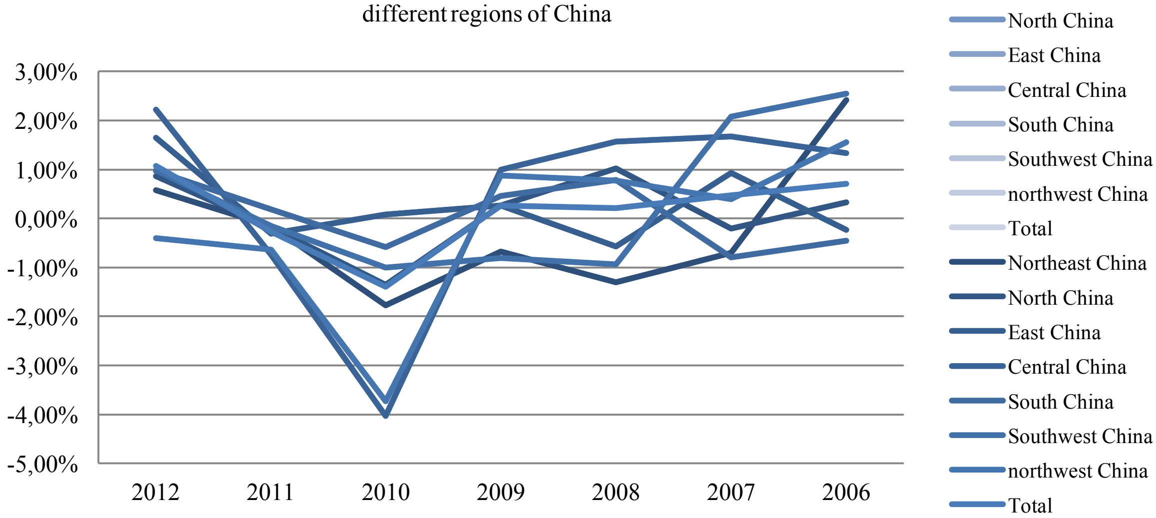


Figure 4-1. Growth chart of underground economic proportion in different regions of China

From 2005 to 12 years, all provinces, municipalities, and autonomous regions in China, except for the proportion of the underground economy of some provinces and cities, have declined. In general, the proportion of the underground economy of various provinces and cities has increased to varying degrees. In particular, East China, North China, Central China, and Southwest China have experienced rapid economic development. Tibet has the highest rate of increase, rising by 12.60% in 8 years, followed by 10.95% of Yunnan, 9.69% of Hainan, and 9.61% of Guizhou. (Figure 4-2, Figure 4-3, Table 4-3) It can be seen from the figure that the proportion of the underground economic increase is mostly concentrated in Yunnan and Guizhou, as well as in Tibet and Hainan. These indicators have risen between these provinces and municipalities and autonomous regions during these eight years. The rapid development of the economy is inseparable. However, the provinces and cities with a decline in the underground economy are mainly concentrated in the three eastern provinces and Inner Mongolia (Lin, Yang, & Yingcai, 2006), the northwest region, and the two regions with the same economic environment. In particular, the decline in Guangxi was 11.56%, second only to Chongqing (11.78%). This fiscal policy that supports the transformation of Guangxi's economic development mode during the "Twelfth Five-Year Plan" period is inseparable from strengthening Guangxi's overall fiscal and taxation management(Dezhou, 2011), but as can be seen from the data, the proportion of Guangxi's underground economy has declined since 2008. This is closely related to the foreign trade environment that was so depressed at the time and so far. Guangdong is different. Guangdong's underground economy is active, and its open economic structure is bright. A large number of small manufacturing and light industries require a large amount of informal labor and underground transactions (Yuanbiao, 2014). The overall decline in the three eastern provinces is inseparable from the economic conditions of the decline of its traditional old industrial base (Donglin, 2004; Xiaoli, 2014).

Table 4-3. Proportion of underground economy

Region	City	Year							
		2012	2011	2010	2009	2008	2007	2006	2005
Northeast China	Heilongjiang	6.22%	4.11%	4.73%	7.94%	8.00%	9.05%	10.91%	9.11%
	Jilin	7.68%	7.78%	7.36%	7.23%	8.25%	8.72%	10.25%	7.96%
	Liaoning	0.28%	-0.18%	0.53%	2.78%	3.56%	5.60%	4.83%	1.88%
North China	Beijing.	4.18%	3.56%	2.95%	4.48%	4.55%	2.84%	3.54%	2.59%
	Tianjin	4.45%	4.27%	5.37%	6.40%	5.20%	4.54%	4.05%	3.27%
	Hebei	10.94%	8.75%	9.33%	10.30%	11.38%	8.47%	8.02%	8.60%
	Inner Mongolia	2.89%	2.44%	3.31%	3.85%	4.52%	5.48%	6.98%	7.69%
	Shanxi	15.86%	13.01%	11.53%	15.74%	13.32%	13.03%	13.04%	14.35%
East China	Shandong	8.19%	6.09%	5.46%	4.98%	4.54%	5.93%	4.25%	6.50%
	Jiangsu	8.17%	7.63%	8.93%	10.40%	9.84%	10.06%	9.58%	9.21%
	Shanghai	1.29%	-1.62%	-3.69%	0.60%	-0.36%	-1.33%	-1.02%	-0.72%
	Zhejiang	9.94%	6.96%	7.28%	7.82%	9.05%	9.86%	7.83%	9.12%
	Anhui	17.02%	14.37%	12.19%	16.97%	19.37%	18.86%	18.84%	15.66%
	Fujian	13.95%	10.90%	9.73%	11.73%	9.72%	10.19%	10.04%	10.99%
Central China	Henan	10.61%	8.99%	8.03%	12.11%	12.74%	10.81%	7.60%	4.63%
	Hunan	9.77%	6.91%	7.61%	10.22%	11.44%	11.73%	8.36%	8.64%
	Hubei	9.20%	7.15%	8.91%	10.10%	7.58%	5.45%	6.42%	6.37%
	Jiangxi	15.77%	13.29%	14.77%	24.25%	20.35%	17.67%	16.32%	13.72%
South China	Guangdong	3.63%	2.71%	1.68%	1.85%	1.70%	2.18%	4.69%	4.73%
	Guangxi	13.60%	12.58%	14.68%	17.94%	20.01%	22.33%	20.63%	25.16%
	Hainan	18.17%	17.72%	17.75%	18.47%	15.91%	10.61%	10.03%	8.48%
Southwest China	Chongqing	7.99%	6.64%	8.27%	10.21%	10.78%	12.34%	19.86%	19.77%
	Sichuan	12.37%	8.47%	9.38%	12.37%	13.08%	11.84%	9.82%	9.00%
	Guizhou	16.57%	15.93%	11.40%	8.29%	7.59%	9.97%	-1.73%	6.96%
	Yunnan	20.61%	21.41%	22.17%	21.03%	20.45%	21.40%	14.30%	9.66%
	Tibet	22.28%	24.02%	23.38%	24.70%	28.01%	28.52%	20.82%	9.68%
Northwest China	Shaanxi	6.44%	6.08%	5.76%	8.65%	7.87%	5.55%	3.87%	2.98%
	Gansu	9.62%	7.23%	8.12%	8.79%	8.01%	8.13%	8.17%	8.91%
	Ningxia	6.60%	8.86%	10.04%	16.90%	15.65%	13.45%	12.06%	8.49%
	Qinghai	7.69%	7.67%	8.24%	9.51%	9.92%	10.09%	12.84%	11.10%
	Xinjiang	1.42%	2.84%	3.93%	9.55%	7.90%	8.80%	7.70%	5.94%

Data from the National Bureau of Statistics of China

The economic environment in the northwest region has been greatly improved over the years with the opening of the western region, especially the adjustment of the economic structure (Yang, 2013), the fiscal and taxation system reform(Rui, 2010) and the traditional production methods for ethnic minorities. Various traditional economic production methods have been incorporated into the track of marketization and industrialization (Yuming, 2009), which have led to effective statistics in the economy that could not be observed (Xiaolin, 2010). These initiatives have led to a good regulation of economic behavior, and the proportion of the underground economy in most provinces and cities in the Northwest has declined. Chongqing has become the city with the fastest decline in the past eight years. It is inseparable from the development after becoming a municipality. The high-speed opening and development require a sound market operation mechanism and standardized economic operation(Jian, Wei, & Yanqi, 2014). Since Chongqing's direct administration, it has continuously regulated its own economic environment, which has led many economic activities that were not included in the formal channels to return to formality, especially as a fixed asset investment to promote Chongqing's economic growth, structural adjustment of ownership, opening up to the outside world, and accumulation of human capital. It needs to be heavily incorporated into the formal economy, otherwise, it will not work (Xinzhong, 2002). While observing the proportion of the underground economy in China's various provinces and cities as a percentage of GDP, we found that the 2012 interval was [0.28%, 22.28%], the 2011 interval was [0.18%, 24.02%], and the proportion in 2010 was [0.53%, 23.38%], the proportion in 2009 was [0.60%, 24.70%], the interval in 2008 was [0.36%, 28.01%], and the interval in 2007 was [1.33%, 28.52%], the interval in 2006.

Figure 4-2. Cities with an increasing proportion of the underground economy in 2005-2012 years

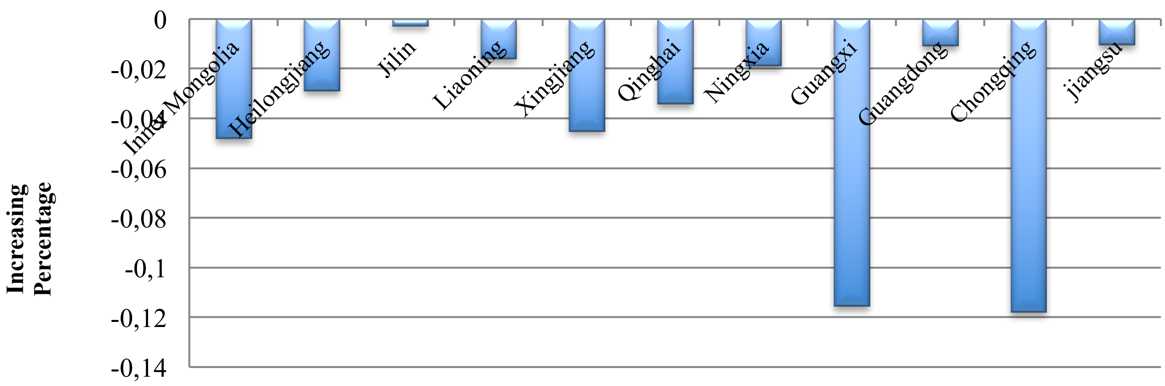
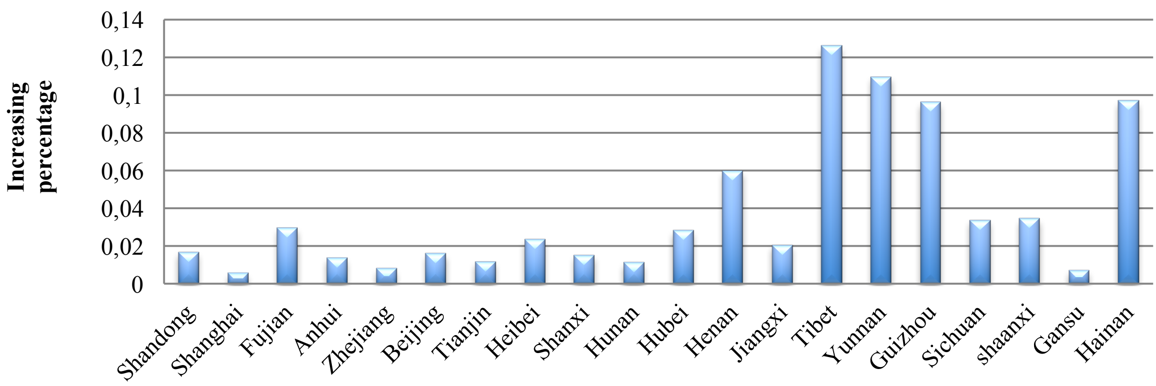


Figure 4-3. Cities with the declining underground economy in 2005-2012



For [1.02%, 20.82%], the range for 2005 was [0.72%, 25.15%]. It can be shown that the proportion of the underground economy in GDP from 2005 to 2012 is only active in the quarter of the national economy, only about 3 percentage points higher in 2007 and 2008, which is in line with China's economy at 07. According to the statistics of the National Bureau of Statistics, China's GDP growth rate in 2008 was 9.62%, down by 4.68 percentage points from 2007(NBSPRC, 2014). In the horizontal observation of the upper and lower limits, we will find that except for the highest in Guangxi in 2005 (25.16%), the upper limit is almost in Tibet. The Tibet Autonomous Region is located on the western border of China. Economic and social development has always been difficult. In particular, the region has relatively traditional folk customs, and it is difficult to standardize economic activities (Yanghai, 2009). According to the 2003 Economic and Social Development Report of Tibet, the economic and social development costs in Tibet are high, the market development is low, the farmers and herdsmen are not competitive in the market, and the human capital in the region needs to be improved (CTRC, 2009). The lower limit was concentrated in Shanghai before 2010, which is consistent with Shanghai's position as the economic center of China and the internationalization of metropolitan cities (Lixin & Jiang, 2000). This type of province and city usually has sound economic rules and regulations, and economic actors usually follow the charter to ensure that their economic behavior is protected by law (Xuwei, 2006). After 2010, it was concentrated in Liaoning Province.

5. Conclusions

Although China also has an interactive social network structure as revealed by The Corner Society, the informal economy has not reached a position that is at least in terms of quantity. In particular, the proportion of the underground economy to GDP is relatively low compared to the post-communist economic system in the same period of economic transition. Moreover, in recent years, there has been a tendency for the growth rate to continue to decline. However, it is generally consistent with the economic development trajectory. Positive growth is more than negative growth, and the proportion of the underground economy is generally rising. Especially in Central China, East China, and Southwest China, where the economy is developing rapidly, the underground economy accounts for more than 10% of GDP, and ranks among the top three in the seven regions, especially in the Tibet Autonomous Region in the southwest. The underground economy accounts for two of the total GDP to 30%. In China, the situation of various provinces, municipalities, and autonomous regions is also quite complicated. Through the comparative analysis of each province and city, we also found interesting phenomena in some regions. For example, in the region where the underground economy continues to decline, only the Northeast And the northwest part of the region; and has been in the country's lowest underground economy, Shanghai gave way to Liaoning after 2009; and the underground economic downturn in various provinces and cities began in 2008 and 2009. Some of these phenomena are because the economic system reform regulates the market environment; some are because their own economic strength is shrinking, and a large number of resources are outflowing; some are because the open geo-economics force them to regulate the economic operation procedures. These are all areas of underground economic dynamics analysis and require more in-depth research and analysis.

Acknowledgments
This study was not funded by any institutions or programs.

References

CTRC. (2009, 2009-03-31). Tibet Economic and Social Development Report p. 013.

Defeng, M., & Mei, L. (2002). The perspective of Street Corner Society——An Investigation of Youth Groups in the First Street Corner of Sub-S. *Society*(09), 29-32.

Dezhou, H. (2011). Research on Fiscal Policy Supporting the Transformation of Guangxi's Economic Development Mode during the Twelfth Five-Year Plan Period *Economic Research Reference*(29), 34-40.

Donglin, S. (2004). Main Problems and Thoughts on the Adjustment and Reconstruction of Old Industrial Bases in Northeast China. *Journal of Social Sciences of Jilin University*(01), 5-13.

Feige, E. L. (1990). Defining and estimating underground and informal economies: The new institutional economics approach. *World Development, 18*(7), 989-1002. doi:http://dx.doi.org/10.1016/0305-750X(90)90081-8

Feige, E. L., & Urban, I. (2008). Measuring underground (unobserved, non-observed, unrecorded) economies in transition countries: Can we trust GDP? *Journal of Comparative Economics, 36*(2), 287-306. doi:http://dx.doi.org/10.1016/j.jce.2008.02.003

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology, 91*(3), 481-510. doi:10.2307/2780199

Gutmann, P. M. (1977). The Subterranean Economy. *Financial Analysts Journal, 33*(6), 26-34. doi:10.2307/4478078

Harriss-White, B. (2010). Work and Wellbeing in Informal Economies: The Regulative Roles of Institutions of Identity and the State. *World Development, 38*(2), 170-183. doi:http://dx.doi.org/10.1016/j.worlddev.2009.10.011

Hasan, R., & Mohammad, S. M. (2015). Multifractal analysis of Asian markets during 2007–2008 financial crisis. *Physica A: Statistical Mechanics and its Applications, 419*, 746-761. doi:http://dx.doi.org/10.1016/j.physa.2014.10.030

Jian, C., Wei, X., & Yanqi, Z. (2014). Construction of Economic Openness Index System in Inland Regions. *Statistics and Decision*(15), 59-62.

Kaufmann, D., Kaliberda, A., & World Bank. Europe and Central Asia Region. Country Department IV. (1996). *Integrating the unofficial economy into the dynamics of post-socialist economies : a framework of analysis and evidence*. Washington, DC: World Bank, Europe and Central Asia, Country Dept. IV.

Lin, M., Yang, C., & Yingcai, Z. (2006). The basic ideas for revitalizing the old industrial bases in Northeast China and regional economic development in Inner Mongolia *Economic Geography*(02), 199-202+206.

Lixin, W., & Jiang, C. (2000). Quantitative Analysis of the Contribution of Foreign Direct Investment to Shanghai's Economic Growth. *Shanghai Economic Research*(05), 36-39+35.

Mankiw, N. G. (2011). *Principles of Economics (6th ed.)*. Boston: Cengage Learning.

Nations, U. (2003). Non-Observed Economy in National Accounts: Survey of National Practices. Geneva.

NBSPRC. (2014). Gross Domestic Product. from National Bureau of Statistics of the People's Republic of China

Nee, V., & Opper, S. (2010). Political Capital in a Market Economy. *Social Forces, 88*(5), 2105-2132. doi:10.2307/40927540

Rui, L. (2010). *Performance Evaluation of Tax Expenditure in Western Development of Xinjiang.* Renmin University of China. Available from Cnki

Shilu, H. (1995). A Successful Example of Participation in Observation: A Review of White's Street Society *Foreign Social Sciences*(03), 70-72.

Smith, J. D. (1987). Measuring the Informal Economy. *Annals of the American Academy of Political and Social Science, 493*, 83-99. doi:10.2307/1046196

White, W. F. (1994). *Street Society A social structure of an Italian slum* Beijing: The Commercial Press.

Williams, C. C., & Martinez-Perez, A. (2014). Why do consumers purchase goods and services in the informal economy? *Journal of Business Research, 67*(5), 802-806. doi:http://dx.doi.org/10.1016/j.jbusres.2013.11.048

Xiaoli, H. (2014). *Research on the measurement of unobserved economic scale in Liaoning Province* Liaoning University. Available from Cnki

Xiaolin, Y. (2010). On the Economic Development of Qinghai Tibetan Area under the Vision of Western Development. *SAR Economics*(08), 206-208.

Xinzhong, Z. (2002). *Quantitative Analysis of Economic Growth Factors in Chongqing* Chongqing University. Available from Cnki

Xuwei, X. (2006). *Research on the agglomeration effect of Shanghai's economic growth.* Fudan University. Available from Cnki

Yang, S. (2013). *Research on Economic Opening of Ningxia Hui Autonomous Region.* Central University for Nationalities. Available from Cnki

Yanghai, M. (2009). *Economic Thinking on the Transformation of Tibetan Economic Structure* Xiamen University. Available from Cnki

Yongxing, W. (2009). *Evaluation and Governance of China's Underground Economy during the Transition Period.* Nankai University. Available from Cnki

Yuanbiao, Z. (2014). *Research on Foreign Trade Structure, Problems and Transformation in Guangdong Province.* South China University of Technology. Available from Cnki

Yuming, Z. W. W. (2009). The Development of Western China and the Construction of Multiculturalism in Modern Northwest Minorities. *Journal of Shaanxi Normal University (Philosophy and Social Sciences*(04), 96-103.

Asian Institute of Research
Connecting Scholars Worldwide

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 290-305
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.88

Do Remittances Have a Real Impact on Economic Performance: Evidence from Côte d'Ivoire

Silvère Yao Konan[1], Felix Fofana N'Zué[2]

[1] Department of Economics and Management, Université Félix Houphouet Boigny Abidjan, Côte d'Ivoire
[2] Department of Economics and Management, Université Félix Houphouet Boigny Abidjan, Côte d'Ivoire

Corresponding Author: Dr. Felix Fofana N'Zue at Université Félix Houphouet Boigny Abidjan Cote d'Ivoire Tel: +225 45 41 11 41 / + 234 816 962 0518. Email: felix.nzue@gmail.com

Abstract
The paper investigated the impact of international remittances inflow on Côte d'Ivoire's economic performance using per capita gross domestic product (GDP) growth. Data ranging from 1975 to 2016 was used within an autoregressive distributed lag (ARDL) model framework. The aim is to establish whether there exist long-run dynamics between remittances, the country's per capita GDP and selected control variables. The empirical findings suggest a long-run relationship between remittances, remittances square, per capita GDP, investment, openness, education, and population size. Interestingly, the paper found that remittances do not significantly impact economic performance however, there exists a nonlinear relationship between remittances and growth. This invariably implies that there is a threshold beyond which, remittances will positively affect per capita growth. This tipping point stands at 1.068% of GDP. The overall implications of the findings are discussed.

Keywords: Remittances, Economic Growth, ARDL Approach, Côte d'Ivoire

JEL Classification: C32, F24, F43

1. Introduction / Background

The World Bank in its publication of Remittances factbook 2016 indicated that worldwide remittance flows had exceeded $601 billion in 2015. Of that amount, developing countries were said to have received about $441 billion, nearly three times the amount of official development assistance (ODA). The true size of remittances, including unrecorded flows through formal and informal channels, is believed to be significantly larger (World Bank, 2016). This increasing trend in remittances is not new. Indeed, already in 2006, recorded remittances sent home by migrants from developing countries reached $206 billion, more than double the level in 2001 (Ratha, 2007).

In sub-Saharan Africa, remittances are also on the rise. Indeed, formal remittances inflows were observed to increase from US$ 34 billion in 2016 to over US$ 38 billion in 2017 (World Bank, 2018). The flow of remittances is directly linked to the level of migration. Indeed, as people migrate in search of greener pastures, they often send resources to those left in the home country. This movement of people could be the consequences of many situations including but not limited to economic hardship, social unrest/conflicts, civil war, etc.

In Cote d'Ivoire for instance, a country known before as land of immigration, with an immigrant population representing 16.4% of the total population in 1988 (INS, 2008 and 2015), has become a country of origin of many migrants gradually. Indeed, the emigration movement that started timidly in the early 1980s with the oil shocks followed with the subsequent economic hardship, gained momentum gradually over the years. Data available showed that emigration from the country stood at 370,866 in 1990 and climbed to 841,241 in 2015 (United Nations, 2017) representing a 126.8 % increase over a period of 15 years.

This increase in the stock of emigrants paralleled the increase in remittances received. Indeed, inward transfers increased from $ 32.185 million in 1980 to $ 336.247 million in 2015 with peaks at $ 373 million and $ 397 million in 2010 and 2011 respectively. These two peaks coincide with the period of civil unrest / civil war in the country. These peaks are in line with the arguments that workers remit more during times of hardship (Ratha, 2013, Edelbloude and al., 2017) as it was the case in Cote d'Ivoire. The increase of remittances inflow over the period ranging from 1980 to 2015 was 944%.

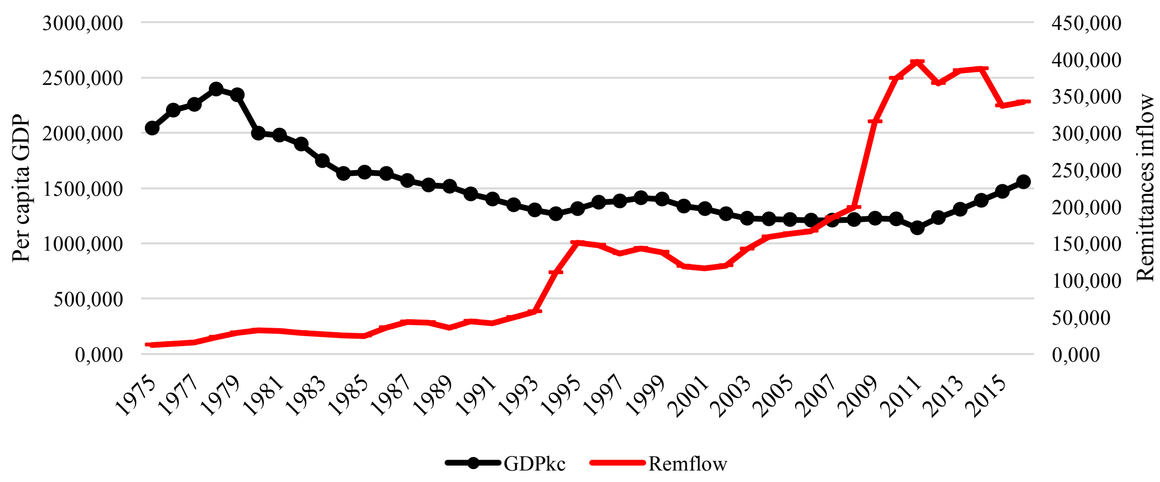
It is well known that inwards remittances provide additional revenues to recipients. These additional revenues could be invested in productive activities and hence fuel economic growth (El-Sakka and McNabb, 1999) or could also be used for schooling thereby improving the quality of the human capital. In so doing, remittances inflow could exert a counterbalancing effect against the negative shocks resulting from the various crises (economic, social, military, political) that the country experienced on one hand. This argument is supported by Fayissa and Nsiah (2010); Jayaraman and al (2012); Shera and Meyer (2013) just to cite a few, who called for actions towards structuring the flow as well as the costs of remittances. On the other hand, remittances inflows could be detrimental to the receiving country's economic performance especially when remittances are spent on consumption dominated in general by foreign goods than on productive investment. When this is the case, remittances will tend to undermine productivity and growth in less developed countries (Giuliano and Ruiz-Arranz, 2006). Given that many empirical studies on the remittances and economic growth nexus are inconclusive (Rao and Hassan, 2011; Gapen and al., 2009; Giuliano and Ruiz-Arranz, 2009; Ziesemer, 2012; Barajas and al., 2009; Nwaogu and Ryan, 2015; Ghosh, 2017), the Ivorian evidence presented in this paper could contribute to the debate since no such evidence has been provided on this country to our knowledge. Moreover, the country in an attempt to harness and structure remittances inflow has instituted a special event since 2012 called the "Diaspora for Growth Forum." It is in line with all the above that we investigated the extent to which remittances inflow has impacted the country's economic performance? Our findings' contributions to existing literature are threefold.

First, there is a long-run dynamic between the remittances variables (remittances, remittances square), per capita Gross Domestic Product (GDP) and some control variables (investment, openness, education and population size). Remittances have a negative and non-significant impact on economic growth. However, remittances square have a positive and significant effect on economic growth, implying a nonlinear relationship between these two variables. This is evidence of a threshold beyond which each dollar received will positively impact economic growth. Second, the investment variable has a positive and significant impact on economic growth in the long-run. The Openness variable proxied by Imports of goods and services also has a positive and significant effect on growth in the long-run. Third, the population variable has a negative and significant impact on economic growth in the short run.

The rest of paper is organized as follows: Section II presents the stylized facts on the country's trends of remittances inflow together with its economic performance captured through per capita GDP. Section III briefly reviews selected literature on the relationship between remittances and economic growth. Section IV presents the Data used including the analytical framework. Sections V and VI present and discuss the empirical findings of the study while section VII concludes the paper.

2. Stylized facts

Figure 1: Trend of per capita GDP and remittances inflow in million of US$ from 1975 to 2016

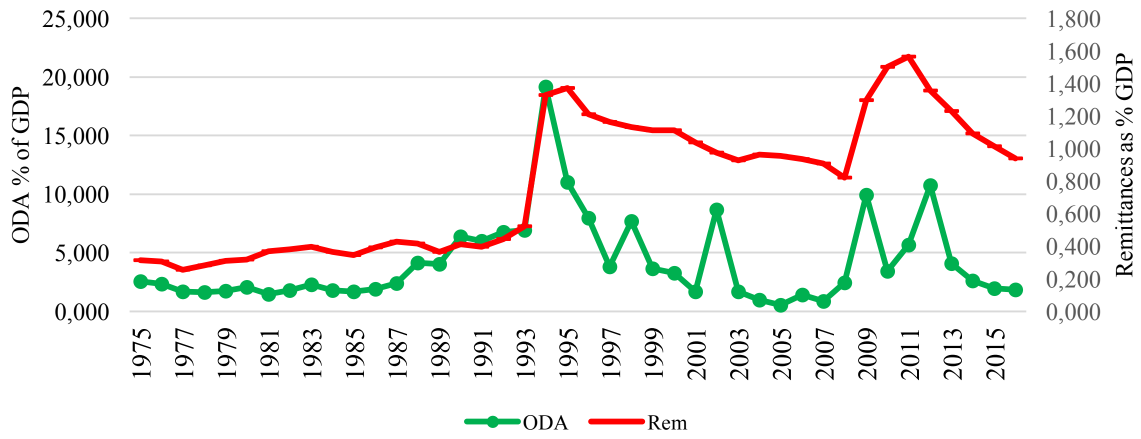


Source: Authors

Data on remittances inflow retrieved from the World Bank (2018) indicate an upward sloping trend throughout the period of analysis. Despite this global upward sloping trend, three sub-periods could be considered very noticeable. These are 1975-2008, 2008-2011 and 2011-2016. During the first episode (1975 – 2008) average annual growth rate of remittances was 9%. However, the country registered a sharp increase from 1993 to 1995 in line with the devaluation of the country's currency (CFA franc). Indeed, remittance inflows stood at $57,564 in 1993 and jumped to over $151,000 in 1995 after the currency devaluation that took place in 1994. This jump represented a 162% increase in the volume of inflow into the country. As observed in Figure 1, after 1995 there was a slight decline in the inflow of remittances. The trend continued till 2002, where it reached $ 120,000, before resuming an upward trend. In the next phase corresponding to 2008-2011, remittances grew at an annual average rate of 26%. It is important to recall that this episode coincides not only with economic hardship (per capita GDP was on a downward sloping trend which started in 1999, see figure 1 above) but also with social unrest. This increased level of remittances inflow could be a clear indication of altruism as argued by Ratha (2013), Edelbloude and al. (2017) in Tunisia during Arab Spring and Koczan (2016) in ex-Yugoslavia. In the last episode (2011-2016), the amount of remittances received though high, exhibits a downward sloping trend even if the decline is not smooth. The civil war ended in 2011 and the country embarked on an economic recovery program with significant and visible results. Indeed, per capita GDP moved from its lowest level ever $1,139 (2011) to $1,229.778 in 2012 and continued its rise to $ 1,553 in 2016.

Figure 2 presents together the trends of both Net Official Development Assistance (ODA) and remittances from 1975 to 2016. The two move closely together although ODA seems to be more volatile than remittance. This is in line with Stojanov and al., (2019).

Figure 2: Trend of Net Official Development Assistant and Remittances both as % of GDP from 1975 to 2016



Sources: Authors

3. Brief review of selected literature

The present section presents a brief review of selected literature. Several scholars have analyzed the relationship between remittances and growth. This section reviews works that found positive impact of remittances on growth as well as works that found negative or no impact at all on economic growth.

Positive link between remittances and growth

Jayaraman and al (2012) analyzed the role of remittances on India's economic growth. Authors used data ranging from 1970 to 2009 and allowed interaction between remittances and financial sector development. They found that remittances and the interaction between remittances and financial sector development had a positive and significant effect on growth over the period of analysis.

Kumar (2013) investigated the relationship between remittances and economic growth in Guyana. Using an augmented Solow framework and an ARDL bounds test for cointegration, he explored the short- and long-run effects of remittances, aid and financial deepening on growth with annual data for the period 1982–2010. His results showed a positive and significant effect of remittances on economic growth both in the short and the long-run.

Goschin (2013) analyzed whether remittances could be a potential economic growth resource for Romania. He used data from 1994 to 2011. He used multi-factorial regression models and found a significant positive impact of remittance inflows on the economic growth in Romania.

Ncube and Brixiova (2013) examined macroeconomic trends, drivers and impact of remittances on African countries from 1990-2011 using a pooled OLS. They established a positive linkage between GDP and remittances.

Vukenkeng A: W: and Ongo N. B. E. (2013), assessed the effect of remittances on the economic growth of Africa through the experiences of Cameroon, Kenya, Lesotho, Morocco, and Nigeria. Using data covering a time period from 1980 to 2010 and multiple regression analysis they found that remittances have a positive and significant effect on economic growth.

Kumar and Stauvermann (2014) used ARDL cointegration and Granger causality test to investigate the cointegration relationship, the short-run, and long-run effects and the causality nexus between remittances per worker, capital and output per worker in Bangladesh over the period 1979-2012. They found positive relationships between remittances and economic growth in the long-run and bidirectional causality.

Konte (2014) re-examined the impact of remittance inflows on growth using data for developing countries over the period 1970-2010. He tried to understand reasons why it has been so difficult to find a positive impact of remittances on growth despite the growing amount of remittances in many developing countries and the different studies that have emphasized the positive effect of remittances on poverty and inequality. He used a bias-adjusted three-step finite mixture approach, which incorporates corrections into the different steps of the estimation. He found that his data are best described by an econometric model with two different growth regimes: one in which remittances have a positive and significant impact on growth and another in which the effect of remittances is insignificant. The analysis of the determinants of the probability of being in the remittances growth-enhancing regime shows that an increase in the level of financial development decreases the probability of a country being in this growth regime, while being a Sub-Saharan African country increases this probability.

Karamelikli H. and Bayar Y. (2015) in a study on remittances and economic growth in Turkey examined the relationship between economic growth, remittances, foreign direct investment inflows, and gross domestic savings. Their data ranged from 1974 to 2013. They used Autoregressive Distributed Lag approach and found that remittances, foreign direct investment, and gross domestic savings had a positive impact on economic growth.

Sebil and Abdulazeez (2015) investigated the relationship between remittances and economic growth in Nigeria, using an error correction modeling approach for the period 1981 to 2011. They found that remittances positively impacted the economic growth of Nigeria in the long-run whereas it as a negative impact in the short run.

Jebran and al (2016) investigated the effects of remittances on per capita economic growth of Pakistan for the period 1976 to 2013. They used an Auto Regressive Distributed Lag (ARDL) Bounds testing model to explore both short and long-run relationships between remittances and per capita economic growth. They found significant positive long-run and short-run impacts of remittances on per capita economic growth.

Matuzeviciute K. and Butkus M. (2016) investigated the impact of remittances on long-run economic growth. They used an unbalanced panel data covering a sample of 116 countries with different development levels and time ranging from 1990 to 2014. They found that in general remittances have a positive impact on long-run economic growth, but the impact differs based on the country's level of economic development and the abundance of remittances in the economy.

Abdelhadi and Bashayreh (2017) investigated whether remittances have a significant role in promoting economic growth in Jordan or not. Their data ranged from 1972 to 2016. They used cointegration and error correction modeling to assess the short and long-run relationship between remittances and growth. They found a stable long-run relationship between GDP per capita and remittances in Jordan as well as in the short run and confirmed the positive significant effect of remittances on economic growth.

Hassan and Shakur (2017) examined the impact of inward remittances flows on per capita gross domestic product (GDP) growth in Bangladesh using data ranging from 1976 to 2012. They found that the growth effect of remittances is negative at first but becomes positive at a later stage, evidence of a non-linear relationship. They argued that their findings suggest a U-shaped relationship between remittances and per capita GDP growth.

Meyer and Shera (2017) investigated the impacts of remittances on economic growth, using panel data set of six high remittances receiving countries: Albania, Bulgaria, Macedonia, Moldova, Romania, and Bosnia Herzegovina during the period 1999–2013. They established a positive and significant impact of remittances on the economic growth of the above countries.

Negative link between remittances and growth

Chami and al. (2003) modeled the causes of remittances and traced their effects through the economy to examine the eventuality of remittances to be a source of capital for development. They established that remittances have a negative significant effect on economic growth because of the existence of moral hazard issues that come from the asymmetric information and uncertainty which underlie remittances. In fact, this negative effect of remittances is explained by the labor decrease due to the reduction of work incentive for receivers and the initial loss of workforce of the senders. Furthermore, Chami and al (2005) using a new panel dataset on remittances, provide another explanation of the negative effect. Indeed, they argued that remittances are not profit-driven but represent compensatory transfers. They are used to support poor families in crises/ recession times. Thus, remittances flows seem to be countercyclical. Therefore, remittances can't play the same role in economic development as foreign direct investment or other sources of capital.

Andersson and Karpestam (2013) using a macroeconomic panel with consumption and remittances data from 50 low and middle-income economies over the period 1980 and 2006, showed evidence of a negative long-run relationship between consumption and remittances, in favor of altruism.

Alkhathlan (2013), did a study in which he used ARDL and error correction model (ECM) techniques to test the relationship between economic growth and outflows of workers' remittances in Saudi Arabia from 1970 to 2010. He showed that there is a negative and insignificant relationship in the long-run and negative and significant relationship in the short term between remittances and economic growth.

No impact of remittances on growth

Barajas et al. (2009) in a paper titled "Do worker's remittances promote economic growth," after a review of past work on remittances and growth estimated a remittances-growth relationship. They argued that when remittances are properly measured and the growth equations well specified, there is no positive impact of remittances on long-term growth. They rather found often time a negative relationship between remittances and growth.

Ofeh and Muandzevara (2017), investigated the effects of migrant remittances on the economic growth of Cameroon. They used data ranging from 1980 to 2013 in a multiple regression setting and found that although migrant remittances are positively associated with economic growth, their relationship is not significant.

Lim and Simon (2015) investigated the economic importance of remittances in the Caribbean Community and Common Market over the period 1975-2010, using panel cointegration tests. They showed that there exist no relationships between remittances and economic growth or investment. However, there is a long-run relationship between remittances and consumption, suggesting that remittances received in this region are used for consumption purposes.

Jouini (2015) investigating the causal links between economic growth and remittances for Tunisia over the period 1970-2010 through two specific transmission channels (development and investment) using a ARDL cointegration approach, found no evidence of impact on economic growth in the long-run, but established a bidirectional causality between remittances and growth in the short run.

Rao and Hassan (2011) on a panel study on 40 receiving countries with remittances ratio to GDP of 1% or more on the period 1960-2007, used panel data estimation and GMM approach to testing the direct growth effects of remittances and the channels through which these remittances affect growth. They showed evidence of insignificant direct growth effects of remittances, but these remittances have indirect growth effects through investment and financial development.

4. Data and method of analysis

The data used for this study is time series obtained from World Development Indicators of the World Bank (World Bank, 2018) and cover period ranging from 1975 to 2016. Taking stock of past work, we use a conventional growth model augmented with a set of control variables. Thus, we have:

$$Y_t = f(L_t, K_t, Z_t) \tag{1}$$

Where Y_t is output measured as per capita Gross Domestic Product (GDP) at time t; L_t is a measure of labor at time t, and it is captured here through the economically active population as a percent of total population, that is the population aged between 15 to 64 years (*Pop64$_t$*); K_t is capital, and it is captured through the gross fixed capital formation in percent of GDP at time *t* (*GFCF$_t$*), and Z_t is the set of control variables and are all transformed into logarithm. The set of control variables includes remittances (*lnrem$_t$*) is measured in percent of Gross Domestic Product (GDP); Human capital development, captured through two variables, i.e. life expectancy (*lnlife$_t$*) and gross primary school enrolment (*lneduc$_t$*); Openness of the country (*lnopen$_t$*) captured through the country's export and import as percentage of GDP; Official Development Assistance (*lnODA$_t$*) also measured as percentage of GDP; and two financial development variables i.e. Domestic credit provided by the financial sector as percentage of GDP (*lnfd1$_t$*) and Domestic credit to private sector by banks as percentage of GDP (*lndf3$_t$*). Thus, equation 1 is rewritten below with all the variables.

$$lngdpk_t = f(lnpop64_t, lninv_t, lnlife_t, lneduc_t, lnopen_t, lnODA_t, lnrem_t, lnfd1_t, lnfd3_t) \qquad (2)$$

Given the time series nature of the data, it is critical to investigate its characteristics. Thus, we need to find out whether the variables to be analyzed are stationary or not. This is done using the traditional Unit Root test, i.e. the Augmented Dickey-Fuller (ADF) and the Philip Perron (PP) Unit Root Tests. This is important since a regression of nonstationary variables on other nonstationary variables give rise to what is known as spurious regression.

Following the results on the time series characteristics of the data, whether Integrated of order 0 or 1 (*I(0)* or *I(1)),* we will investigate the short and long-run dynamics of the variables of interest using the Bounds test approach suggested by Pesaran and al (2001). To do that, we need to reformulate our model in a way that shows both the short run and long-run dynamics. The Autoregressive Distributed Lag (*ARDL*) model allows us to do that. The generalized *ARDL*(*p,q*) model is given below:

$$Y_t = \alpha \quad + \sum_{i=1}^{p} \delta_i \, Y_{t-i} + \sum_{i=0}^{q} \beta'_i \, X_{t-i} + \varepsilon_{jt} \qquad (3)$$

Where Y_t is the endogenous variable, X_t represents the explanatory variables and are all allowed to be *I(0)* or *I(1)*; α is the constant, δ and β are parameters to be estimated; *p* and *q* are optimal lag orders. For the Bounds Test we use the Akaike Information Criterion (AIC) to determine the optimal lag which gives us the unrestricted Error Correction Model (Pesaran and al. 2004 called it conditional ECM) or put differently, conditional ARDL(*p,q*) presented below:

$$\begin{aligned}
\Delta lngdpk_t = \alpha \quad &+ \delta_1 lngdpk_{t-1} + \delta_2 lnlife_{t-1} + \delta_3 lninvt_{t-1} + \delta_4 lnpop64_{t-1} + \delta_5 lnopen_{t-1} + \\
&\delta_6 lnODA_{t-1} + \delta_7 lneduc_{t-1} + \delta_8 lnrem_{t-1} + \delta_9 (lnrem_{t-1})^2 + \delta_{10} lnfd1_{t-1} + \delta_{11} lnfd3_{t-1} + \\
&\textstyle\sum_{i=0}^{q} \beta_{1i} \Delta lngdpk_{t-i} \; + \sum_{i=0}^{q} \beta_{2i} \, \Delta lnlife_{t-i} + \sum_{i=0}^{q} \beta_{3i} \, \Delta lninv_{t-i} + \sum_{i=0}^{q} \beta_{4i} \, \Delta lnpop64_{t-i} + \\
&\textstyle\sum_{i=0}^{q} \beta_{5i} \, \Delta lnopen_{t-i} + \sum_{i=0}^{q} \beta_{6i} \, \Delta lnODA_{t-i} + \; \sum_{i=0}^{q} \beta_{7i} \, \Delta lneduc_{t-i} + \sum_{i=0}^{q} \beta_{8i} \, \Delta lnrem_{t-i} + \\
&\textstyle\sum_{i=0}^{q} \beta_{9i} \, \Delta (lnrem_{t-i})^2 + \sum_{i=0}^{q} \beta_{10i} \, \Delta lnfd1_{t-i} + \sum_{i=0}^{q} \beta_{11i} \, \Delta lnfd3_{t-i} + \varepsilon_t \qquad (4)
\end{aligned}$$

The Bounds test is equivalent to testing the following hypotheses for the above equation:

$$\begin{cases} H_0: \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = \delta_7 = \delta_8 = \delta_9 = \delta_{10} = \delta_{11} = 0 \\ H_1: \delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq \delta_7 \neq \delta_8 \neq \delta_9 \neq \delta_{10} \neq \delta_{11} \neq 0 \end{cases} \qquad (10)$$

The null hypothesis H_0 test the absence of a long-run equilibrium relationship between the dependent variable and the explanatory variables. The statistics underlying this hypothesis test is the familiar Wald or F-statistics in a Generalized Dicker Fuller type regression used to assess the significance of lagged levels of variables under consideration in an unrestricted equilibrium error correction regression (Pesaran and al 1999). Thus, if we accept H_0 we can conclude that there is no long-run relationship between the variables and that they are not cointegrated. However, if we reject the null hypothesis, then, we conclude that there is a long-run relationship between the variables. A key assumption in the ARDL Bounds Testing methodology of Pesaran and al (2001) is that the error terms in the above equation be serially independent, i.e. no autocorrelation. Once this condition is satisfied we need to ensure that the model is dynamically stable.

The asymptotic distribution of both Wald and F-statistics are nonstandard under the null hypothesis of no long-run relationship irrespective of whether the variables are *I(0), I(1)* or mutually cointegrated. However, Pesaran and al (2001) have provided asymptotic critical values bounds for all classifications of the regressors into *I(1)* and/or *I(0).* Thus, if the computed F-statistics fall below the lower bound, we accept the null hypothesis of no cointegration. In such a situation, we proceed to estimate the short-run dynamics using Ordinary Least Squares (OLS) regression technic. If the F-statistics is greater than the upper bound, we reject the null hypothesis and conclude that there exists a long-run relationship between the variables. When this is the case, the estimation of the ARDL model provides us with both the long-run (levels equation) and short-run dynamics (difference equation). If the F-statistics fall between the bounds, the test is inconclusive. In this case, knowledge of the cointegration rank of the forcing variables (explanatory variables) is required to proceed further (Pesaran and al 1999).

In addition to the F-test above, we can also perform a "Bounds t-test" to cross-check the results. The test is as follows for:

$$\begin{cases} H_0: \delta_1 = 0 \\ H_1: \delta_1 < 0 \end{cases} \tag{11}$$

Here also, the null hypothesis, H_0 tests the absence of a long-run equilibrium relationship between the dependent variable and the explanatory variables. If the t-statistics is greater than the I(0) bound, tabulated by Pesaran and al (2001; pp 303-304) and Kripfganz and al (2018; pp 30-33), accept the null hypothesis and conclude that there is no cointegration between the variables. If the t-statistics is less than the *I(1)* bound, reject the null hypothesis and conclude that there is a long-run relationship between the variables. Here again, if the t-statistics falls between the two bounds, the test is inconclusive. All computations were done using the statistical software Stata 14.2.

5. Empirical results

This section presents the empirical findings of the relationship between Cote d'Ivoire's economic performance and remittances inflow. We start with the descriptive statistics (tables 1 and 2). In Table 1, we observe that over the period of analysis, the country's per capita GDP averaged US$ 1,517, and the highest level stood at US$ 2,391 in 1978. The lowest per capita GDP was registered in 2011 during the civil war. Investment is proxied by Gross Fixed Capital Formation (*GFCF*) as a percentage of GDP. It stood on average at 14.5% with its highest level being 29.66% in 1978. This was achieved during the period characterized as the Ivorian Miracle. Unfortunately, the miracle did not last. Investment embarked in a sharp downward sloping trend to reach its lowest level in 2003 at 8.253% of GDP when the regional threshold is set at 20%. Imports of goods and services (*M*) stood on average at 34.463%. Life expectancy at birth (*life*) in the country stood on average at 50 years, with the highest level being 53 years. This is an indication of low human capital development. Workers remittances (*Rem*) represented, on average 0.78% of GDP over the period of analysis. The highest contribution of remittances to GDP stood at 1.563%. We also looked at an indicator of financial development, i.e. Domestic Credit provided by the Financial Sector (*DCfcial*) it stood on average at 31.5% of GDP with its highest level being 51.26%.

Table 1: Descriptive statistics of selected variables

Variable	Obs	Mean	Std. Dev	Min	Max
X	42	40.533	6.596	29.442	53.820
GDPkc	42	1517.235	343.464	1138.665	2391.924
GFCF	42	14.535	5.913	8.253	29.661
M	42	34.463	5.849	20.198	44.332
Life	42	50.178	2.161	46.597	53.078
ODA	42	4.150	3.688	0.534	19.170
pop1564	42	52.840	0.808	51.715	54.513
educp	42	73.861	6.961	63.928	93.634
Upop	42	42.796	6.088	32.229	54.869
Remflow	42	135.868	124.465	12.132	396.604
Rem	42	0.784	0.412	0.253	1.563

DCFcial	42	31.545	10.706	14.415	51.260
DCPr	42	25.277	11.312	9.748	42.264
DCBks	42	24.948	11.099	9.668	41.871

Authors' calculation

Table 2 presents pairwise correlation between the variables of interest. This table gives an indication of the degree of association between the variables. We can observe from the table that there is a strong negative association between remittances and growth. Indeed, the correlation coefficient is -0.819 and significant. This variable also has strong positive association with the size of the active population. The remittances variable has negative association with investment and life expectancy. The ARDL estimation will enable a better understanding of these associations.

Table 2. Pairwise correlation of variables of interest

	lngdpk	lnlife	lninvt	lnpop64	lnopen	lnoda	lneduc	lnupop	lnrem	lnremsq	lnfd1	lnfd3
lngdpk	1.000											
lnlife	0.181	1.000										
	(0.252)											
lninvt	**0.816***	0.135	1.000									
	(0.000)	(0.394)										
lnpop64	**-0.654***	-0.266	-0.213	1.000								
	(0.000)	(0.088)	(0.176)									
lnopen	-0.220	**-0.506***	-0.035	0.146	1.000							
	(0.161)	(0.000)	(0.828)	(0.356)								
lnoda	**-0.318***	0.108	-0.253	0.207	-0.201	1.000						
	(0.040)	(0.494)	(0.106)	(0.188)	(0.202)							
lneduc	-0.228	**0.362***	0.152	**0.612***	-0.085	0.047	1.000					
	(0.146)	(0.019)	(0.337)	(0.000)	(0.593)	(0.767)						
lnupop	**-0.744***	-0.008	**-0.334***	**0.871***	0.238	0.069	**0.704***	1.000				
	(0.000)	(0.957)	(0.031)	(0.000)	(0.129)	(0.663)	(0.000)					
lnrem	**-0.819***	**-0.340***	**-0.407***	**0.877***	**0.370***	**0.335***	**0.445***	**0.822***	1.000			
	(0.000)	(0.027)	(0.008)	(0.000)	(0.016)	(0.030)	(0.003)	(0.000)				
lnremsq	**0.887***	**0.305***	**0.538***	**-0.838***	-0.216	-0.230	**-0.428***	**-0.826***	**-0.934***	1.000		
	(0.000)	(0.050)	(0.000)	(0.000)	(0.170)	(0.143)	(0.005)	(0.000)	(0.000)			
lnfd1	**0.586***	**0.764***	**0.337***	**-0.656***	**-0.622***	0.148	-0.053	**-0.591***	**-0.712***	**0.688***	1.000	
	(0.000)	(0.000)	(0.029)	(0.000)	(0.000)	(0.350)	(0.741)	(0.000)	(0.000)	(0.000)		
lnfd3	**0.783***	**0.646***	**0.503***	**-0.769***	**-0.509***	-0.039	-0.179	**-0.713***	**-0.865***	**0.866***	**0.946***	1.000
	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.806)	(0.257)	(0.000)	(0.000)	(0.000)	(0.000)	

The time series characteristics of the data were analyzed via the Unit Root test. The results of these tests are presented in Table 3 below.

Table 3. Results of Unit Root Test using ADF and Philip Perron

Variables	Levels		1st Difference		
	ADF	PPerron	ADF	PPerron	Conclusion
$lngdpk_t$, lag(2)	-2.447	-1.568	**-3.133***	**-4.113***	I(1)
	(0.129)	(0.499)	(0.024)	(0.001)	
$lnlife_t$, lag(1)	-7.600	-1.086	-1.102	-1.456	I(0)
	(0.000)	(0.721)	(0.714)	(0.555)	
$Lninv_t$, lag(1)	-1.769	-1.549	**-3.794***	**-4.961***	I(1)
	(0.396)	(0.509)	(0.003)	(0.000)	
$lnpop64_t$, lag(2)	-0.516	0.661	**-2.903***	**-2.885***	I(1)
	(0.889)	(0.989)	(0.045)	(0.047)	
$lnopen_t$, lag(1)	-1.326	-1.258	**-3.536***	**-5.251***	I(1)

	(0.617)	(0.648)	(0.007)	(0.000)	
$lnoda_t$, lag(2)	-2.169	-2.851	**-4.053***	**-8.572***	I(1)
	(0.218)	(0.051)	(0.001)	(0.000)	
$lneduc_t$, lag(2)	-1.161	-0.395	**-2.966***	**-3.814***	I(1)
	(0.690)	(0.911)	(0.038)	(0.003)	
$lnupop_t$, lag(1)	1.014	-0.705	**-4.890***	**-3.927***	I(1)
	(0.994)	(0.846)	(0.000)	(0.002)	
$lnrem_t$, lag(1)	-1.551	-1.398	**-4.240***	**-5.191***	I(1)
	(0.508)	(0.583)	(0.001)	(0.000)	
$lnremsq_t$, lag(1)	-1.494	-1.330	**-5.631***	**-5.965***	I(1)
	(0.537)	(0.615)	(0.000)	(0.000)	
$lnfd1_t$, lag(1)	-1.204	-1.077	**-4.207***	**-4.239***	I(1)
	(0.672)	(0.724)	(0.001)	(0.001)	
$lnfd3_t$, lag(1)	-1.080	-1.053	**-5.352***	**-5.333***	I(1)
	(0.723)	(0.734)	(0.000)	(0.000)	

Schwartz-Bayesian Information Criterion (SBIC) was used to determine the optimal lag order
Source: Authors' calculation

With the exception of the life expectancy variable, which is stationary at level, i.e. I(0), the remaining variables are all stationary after first difference. They are thus I(1). This is a good reason to use the Bounds test to assess the long-run dynamics of the model. The results of the Bounds test are presented in Table 3. Here we considered three specifications of our equation of interest. The first specification (Model 1) is our full model with all the variables of interest. The second specification (Model 2) is the full model without the financial development variables (*$lnfd1_t$* and *$lnfd3_t$*). The last specification (Model 3) is the full model without the financial variables as well as the life expectancy (*$lnlife_t$*) and the official development assistant (*$lnoda_t$*) variables. Model 1 is an *ARDL(1,0,0,1,0,0,0,0,0,0,0)*. The F-statistic calculated is **7.827**, which is greater than the critical value at 5% level (**3.24**) of the upper bound *I(1)*. We, therefore, reject the null hypothesis.

Table 4. Results of the Bounds test.

Dependent Variable: *lngdpk* (model 1) Bounds Test ARDL(1,0,0,1,0,0,0,0,0,0,0)	***lngdpk* (model 2)** ARDL(1,0,0,1,0,0,0,0,0)	***lngdpk* (model 3[a])** ARDL(1,0,1,0,0,0,0)
***H_0* ➔ No levels relationship**		
F-stat = 7. 827	**F-stat= 9.877**	**F-stat = 13. 519**
Critical Value at 5% [I(0) I(1)]	[I(0) I(1)]	[I(0) I(1)]
k=10 [2.06 3.24]	**k=8** [2.22 3.39]	**k=6** [2.45 3.61]
Reject H_0 if $F_{stat} > F_\alpha$ for I(1)	**Reject H_0**	**Reject H_0**
t-stat= -3.488	**t-stat= -4.173**	**t-stat= -6.568**
Critical Value at 5% [I(0) I(1)]	[I(0) I(1)]	[I(0) I(1)]
k=10 [-2.86 -5.03]	**k=8** [-2.86 -4.72]	**k=6** [-2.86 -4.38]
Inconclusive if $t_{\alpha,I(0)} < t_{stat} < t_{\alpha,I(1)}$	**Inconclusive**	**Reject H_0 if $t_{stat} < t_{\alpha,I(1)}$**

Source: Authors' calculation

We conclude that the variables in Model 1 are cointegrated. However, the t-statistic associated with Model 1 does not yield the same result. Indeed, the value of the t-statistic **(-3.488)** falls between the bounds, and it is therefore inconclusive. We proceeded with Model 2. This is an *ARDL(1,0,0,1,0,0,0,0,0)*. In this case, the results are similar to that of Model 1. Indeed, the *F*-statistic **(9.877)** is greater than the critical value at 5% probability level for *I(1)*. We, therefore, reject the null hypothesis of no cointegration and conclude that the variables in that Model are cointegrated. As indicated above, like in Model 1, the *t*-statistic **(-4.173)** falls between the bounds, and it is therefore inconclusive. Let's now turn to Model 3 which is an *ARDL(1,0,1,0,0,0,0)*. Here, the *F*-statistic (**13.519**) is greater than the critical value at 5% probability level for *I(1)* hence, we reject the null hypothesis of no cointegration. Similarly, the *t*-statistic **(-6.568)** is less than the critical value at 5% probability level. Here we also reject the null hypothesis of no cointegration. These two results for Model 3 give support to the existence of a long-run relationship, i.e. the variables are cointegrated.

Based on the above results, we proceeded to estimate the ARDL in the Error Correction setting to determine the long and short-run dynamics. For comparison purpose, we estimated the three models and presented the results in Table 5. Model 1 is the *ARDL(1,10)*. The error correction coefficient is negative and significant as expected. It confirms the results of the Bounds test. In the long-run, we observe that the investment variable has the expected sign, and it is significant. Our variable of interest, i.e. remittances ($lnrem_t$), has a negative sign and is not significant. However, its quadratic term is positive and significant, indicating a nonlinear relationship between remittances and growth. This result indicates that remittances do not systematically impact economic growth. It is only up to a threshold that they will impact the country's growth. Using the empirical result, we estimated the threshold level to be around 1.068% of GDP holding other variables constant. In terms of value, remittances inflow should be at least up to 391.560 million US$ to start positively impacting the country's economic growth. The results also indicate a negative impact of the population size on the country's economic performance in the short run. This is understandable especially in a situation where unemployment is rampant, increases in the size of the active population add more burden on the economic performance (having fewer individuals working to cater for an increasing population). Results also indicate model stability**.** Furthermore, we can infer from the results that there is short-run causality going from population size to growth economic. In Model 2 which is an *ARDL(1,8)*, although we remove the financial development variables, the results are not very different. Indeed, the error correction coefficient is **-0.569** and it is significant as expected, confirming the existence of a long-run relationship. The coefficients have the same signs as in Model 1. This Model 2 is also stable (See the CUSUMQ graph in the Annex). In Model 3, as indicated earlier we dropped not only the financial development variables but also the life expectancy and official development assistance variables. Thus, we have an *ARDL(1,6)* model. The coefficient of the error correction term is also negative and significant. The model's results provide support for a nonlinear relationship between remittances and economic growth. The coefficient of the quadratic term of the remittances variable is positive and significant **(0.183**). The model is also stable (see the CUCUMSQ graph in the Annex).

Table 5. Results of the various ARDL models

	Model 1	**Model 2**	**Model 3**
	ARDL(1,0,0,1,0,0,0,0,0,0,0)	**ARDL(1,0,0,1,0,0,0,0,0)**	**ARDL(1,0,1,0,0,0,0)**
		Long-run dynamics	
ECT_{t-1}	**-0.537*****	**-0.569*****	**-0. 563*****
	(0.002)	(0.000)	(0.000)
$lnlife_t$	0.085	-0.050	
	(0.923)	(0.936)	
$lninv_t$	**0.336*****	**0.314*****	**0.315*****
	(0.000)	(0.000)	(0.000)
$lnpop64_t$	3.312	2.091	2.176
	(0.392)	(0.492)	(0.193)
$lnopen_t$	-0.122	-0.164	**-0.1695****
	(0.342)	(0.100)	(0.023)
$lnoda_t$	0.001	0.002	
	(0.975)	(0.882)	
$lneduc_t$	-0.293	-0.186	-0.210
	(0.432)	(0.532)	(0.131)
$lnrem_t$	-0.055	-0.031	-0.024
	(0.545)	(0.676)	(0.668)
$lnremsq_t$	**0.196****	**0.178*****	**0.183*****
	(0.010)	(0.004)	(0.001)

lnfd1$_t$	0.157			
	(0.427)			
lnfd3$_t$	-0.142			
	(0.534)			
		Short run dynamics		
Constant	-2.994	-0.180		-0.410
	(0.719)[a]	(0.981)		(0.908)
$\Delta lnpop64_{t-1}$	**-8.293****	**-7.496****		**-7.543*****
	(0.032)	(0.038)		(0.006)
Adj R-squared	0.651	0.665		0.685
$F_{(12, 28)}$ =	**7.210*****(0.000)	$F_{(10, 30)}$ = **8.940***** (0.000)	$F_{(8,32)}$=	**11.90***** (0.000)
Breusch-Godfrey LM test for no autocorrelation				
$\chi^2_{(1)}$	0.913 (0.339)	0.224 (0.636)	$\chi^2_{(1)}$	0.258 (0.611)
White's test for Ho: homoscedasticity				
$\chi^2_{(40)}$	41.000 (0.426)	41.000 (0.426)		41.000 (0.426)
CUSUMSQ[b]	Stable	Stable		Stable

For each equation we tested for the absence of serial correlation as well as homoscedasticity. The null of no autocorrelation and homoscedasticity could not be rejected.

[a] Number in parenthesis are p-values; [b] Asterisk indicates significant levels i.e. * ➔10%, ** ➔ 5% and *** ➔ 1%.

[b] Graphs of CUSUMSQ are presented in the Annex.

6. Discussions and recommendations

Remittances do not exert any significant impact on per capita GDP growth in the long-run and this is in line with Chami and al. (2003, 2005), Rao and Hassan (2011). Indeed, most of the remittances sent to Côte d'Ivoire promote and enhance consumption (Konan, 2017) like among others in Tunisia (Jouini, 2015), in the Caribbean (Lim and Simmons, 2017). Thus, remittances may be compensatory transfers (Chami and al., 2005) and are then countercyclical. As an illustration, peaks of remittances over the study period were obtained in 2011 during the post-electoral crisis in which more than 3,000 people died. Money sent during these hard times by migrants provided support to families left behind.

However, the positive and significant value of the remittances square reflects the existence of a threshold from which remittances can positively impact growth. The mean average of the remittances to GDP ratio is 0.78%. This average is too low and it should be noticed that remittances used here are those sent through formal channels and does not take into account the important amount of remittances sent through informal channels. Actions need to be taken to better-channeled remittances towards investments purposes rather than consumption purposes by involving diaspora associations, banking sector. In addition, the promotion of formal channels could provide better estimations of remittances and their impact on economic growth.

The positive and significant value of the investment on GDP is expected and is consistent with investment theory and in line with studies by (Jouini, 2015; Nyamongo and al., 2012; Ghosh, 2017; Goschin, 2014). Furthermore, the negative and significant value of Error Correction Term (ECT) means that there is an adjustment to the long-run equilibrium. The adjustment speed from the short-run disequilibrium towards the long-run is faster when ECT is close to -1. In our case, ECT is equal to -0.537 in model 1 and -0.563 in model 3, that means that a deviation from the equilibrium this year will be corrected by 56.3% in model 3 in the following year. So it will take about 2 years to restore the long-run equilibrium state. This result is coherent with that of Jouini (2015) who found a faster adjustment process (64.2%) in Tunisia.

The negative and significant impact of the population size on the country's economic performance in the short run should be linked to Demographic Dividend issues not discussed in this paper. However, computations done by Dramani and Oga (2017) using National Transfer Account (NTA) methodology, indicate that the support ratio (which is defined as the ratio of the effective number of producers (L) to the effective number of consumers (N).)

for Côte d'Ivoire in 2016 is only 38.1%. This indicates that there are only 38 effective workers for 100 effective consumers. This ratio is 49% for Ghana and 50.8% for Senegal.

7. Concluding remarks

The objective of this study was to investigate the impact of remittances on economic growth. The data used range from 1975 to 2016. An *ARDL* model was used to assess the long-run relationship between *remittances*, per capita *GDP and a set of control variables including* investment, life expectancy, education, openness, and population size. We found, the existence of a long-run relationship between remittances, *remittances square*, per capita GDP, investment, education, openness and population size. Thus, they move together in the long-run. Remittances have a negative and non-significant impact on economic growth. However, remittances square affects positively and significantly economic growth. This is evidence of a nonlinear relationship between these two variables. Thus, beyond a threshold, each dollar received will have a significant impact on economic growth. We also found a positive and significant impact of investment, openness on economic growth in the long-run. Population has a negative and significant impact on economic growth in the short run.

In view of the above findings, it is recommended that Government and the banking system take actions to better structure the inflow of remittances and enable these external funds to be used for productive investment rather than consumption of goods and services. In that vein, the Ministry in charge of the Diaspora is called upon to put in place a mechanism via the "Diaspora for Growth Forum" not only to harness remittances but also to channel funds mobilized towards priority areas that could have a multiplying effect on other areas.

References

Abdelhadi S. and Bashayreh A. (2017), Remittances and Economic Growth Nexus: Evidence from Jordan, *International Journal of Business and Social Science,* Vol. 8 (12): 98-102

Alkhathlan, A.K., 2013. The nexus between remittance outflows and growth: the case of Saudi Arabia. Econ. Model. Vol. 33, pp. 695–700.

Andersson, F.N.G., Karpestam, P., 2013. International remittances. A proposal how to test hypotheses about determinants of remittances with macroeconomic time series. Working Papers 2011:1. Lund University, Department of Economics.

Barajas A., Chami R., Fullenkamp C., Gapen M. and Montiel P. (2009), Do Workers' Remittances Promote Economic Growth? *IMF Working Paper* WP/09/153.

Chami, R., Fullenkamp, C., Jahjah, S., 2005. Are Immigrant Remittance Flows a Source of Capital for Development?, *IMF Staff Papers* 52,1,55-81, http://www.highbeam.com/doc/1G1-133132978.html.

Chami, R., Fullenkamp, C., Jahjah, S., 2003. Are Immigrant Remittances Flows a Source of Capital for Development, IMF Working Paper (WP/03/189).

Ghosh Dastidar, S. (2017), Impact of Remittances on Economic Growth in Developing Countries: The Role of Openness. *Global Economy Journal*, 13(1), pp. -. Retrieved 30 Apr. 2019, from doi:10.1515/gej-2016-0066

Dramani, L., & Oga, I. J.-B. (2017). Understanding Demographic Dividends In Africa: The NTA Approach. *Journal of Demographic Economics,* 83(01), 85–101. doi:10.1017/dem.2016.30 Edelbloude, J., Fontansers, C., Makhlouf, F., (2017), Do Remittances respond to Revolutions? The Evidence from Tunisia, *Research in International Business and Finance,* http://dx.doi.org/10.1016/j.ribaf.2017.04.044

El-Sakka, M. I. T. & McNabb, Robert, (1999), The Macroeconomic Determinants of Emigrant Remittances, *World Development*, Elsevier, vol. 27(8), pages 1493-1502, August.

Fayissa, Bichaka & Nsiah, Christian. (2008), The Impact of Remittances on Economic Growth and Development in Africa, *The American Economist*, 55 (2), doi: 10.1177/056943451005500210

Gapen, M.T., Chami, M.R., Montiel, M.P., Barajas, M.A., Fullenkamp, C., (2009), Do Workers' Remittances Promote Economic Growth?. (No. 9-153), *International Monetary Fund*.

Giuliano, Paola and Ruiz-Arranz, Marta, (2006), Remittances, Financial Development, and Growth, *IMF Working Paper* No. 05/234; IZA Discussion Paper No. 2160. Available at SSRN: https://ssrn.com/abstract=888103

Giuliano, P., & Ruiz-Arranz, M. (2009), *Remittances, financial development, and growth. Journal of Development Economics, 90(1), 144–152.* doi:10.1016/j.jdeveco.2008.10.005

Goschin Z. (2013), The Remittances as a Potential Economic Growth Resource for Romania *Annales Universitatis Apulensis Series Oeconomica,* Vol. 15(2): 655-661.

Goschin, Z., (2014), Remittances as an economic development factor. Empirical evidence from the CEE countries, *Procedia Economics and Finance*. Vol. 10, pp.54 – 60

Hassan G. M. and Shakur S. (2017), Nonlinear effect of remittances on per capita GDP growth in Bangladesh, *Economies*, 5,25; doi:10.3390/economies5030025.

INS, (2008), *Enquête sur le niveau et les conditions de vie des ménages*, Rapport descriptif, http://www.ins.ci/ENV/ENV2008.pdf

INS (2015), *Enquête sur le niveau et les conditions de vie des ménages*, Rapport descriptif, http://www.ins.ci/n/templates/docss/env2015.pdf

Jayaraman T.K., Choong C.K. and Kumar R. R. (2012). Role of remittances in India's economic growth *Global Business and Economics Review,* http://www.inderscience.com/info/inarticletoc.php?jcode=gber&year=2012&vol=14&issue=3Vol. 14(3):159-177

Jebran K., Abdullah, Iqbal A. and Ullah I. (2016), Effects of Remittances on Per Capita Economic Growth of Pakistan, *Pakistan Business Review* pp. 1-18

Jouini, J., 2015. Economic growth and remittances in Tunisia: bi-directional causal links. *J. Policy Model.* Vol. 37, pp. 355–373.

Karamelikli H. and Bayar Y. (2015), Remittances and Economic Growth in Turkey, *Ecoforum*, Vol. 4 Issue 2(7):33-40

Koczan, Z., (2016), Remittances during crises: Evidence from ex-Yugoslavia, *Economics of Transition*, Vol. 24 (3):507–533, DOI: 10.1111/ecot.12099

Konan, Y.S., (2017), "Post electoral crisis and international remittances: evidence from Côte d'Ivoire"?, Post electoral crisis and international remittances: evidence from Côte d'Ivoire — Economics E-Journal

Konte Maty (2014), Do Remittances Not Promote Growth? A bias-adjusted three-step mixture-of-regressions, United-Nations (UNU-MERIT) *working paper*

Kumar R. R. (2013) Remittances and economic growth: A study of Guyana, *Economic Systems* Vol. 37(3): 462-472

Kumar, R. R., & Stauvermann, P. J. (2014). Exploring the nexus between remittances and economic growth: a study of Bangladesh. *International Review of Economics*, Vol. 61(4), 399–415. doi:10.1007/s12232-014-0199-3

Kripfganz, S. and D. C. Schneider (2018), Response surface regressions for critical value bounds and approximate p-values in equilibrium correction models. *Manuscript*, University of Exeter and Max Planck Institute for Demographic Research, www.kripfganz.de/research/Kripfganz_Schneider_ec.html.

Lim, S., & Simmons, W. O. (2015). Do remittances promote economic growth in the Caribbean Community and Common Market? *Journal of Economics and Business,* Vol. 77, 42–59. doi:10.1016/j.jeconbus.2014.09.001

Matuzeviciute K. and Butkus M. (2016), Remittances, Development Level, and Long-Run Economic Growth, *Economies*, vol. 4, 28; doi: 10.3390/economies4040028

Meyer, D., A. Shera, (2017), The Impact of Remittances on Economic Growth: An Econometric Model, *Economia*, vol. 18, p. 147–155

Ncube, M., Brixiova, Z., 2013. Remittances and their macroeconomic impacts: evidence from Africa. *Working Paper* N.188. African Development Bank Group.

Nwaogu, U. G., and M. J. Ryan, (2015), FDI, Foreign Aid, Remittance and Economic Growth in Developing Countries, *Review of Development Economics* 19 (1): 100–115.

Nyamongo, E., M., R., N. Misati, L., Kipyegon, L., Ndirangu, (2012), Remittances, financial development and economic growth in Africa, *Journal of Economics and Business*, vol. 64, p.240– 260

Ofeh M. A. and Muandzevara A. T. (2017), Investigating the Effects of Migrant Remittances on the Economic Growth of Cameroon, *International Journal of Economics and Finance.* Vol. 9(2):58-69

Pesaran, M. H., Shin, Y., and Smith, R. J. (1999), Bounds Testing Approaches to the Analysis of Long-run Relationships. Edinburgh School of Economics *Discussion Paper Series* No. 46.

Pesaran, M.H., Shin, Y., and Smith, R.J., (2001). Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, Vol.16 pp. 289-326.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2004), Bounds Testing Approaches to the Analysis of Long-run Relationships. https://doi.org/10.17863/CAM.5093

Rao, B. B., & Hassan, G. M. (2011). *A panel data analysis of the growth effects of remittances. Economic Modelling, 28(1-2), 701–709.* doi:10.1016/j.econmod.2010.05.011

Ratha, D., (2007), Leveraging remittances for development, *Migration Policy Institute*, Washington D.C., World Bank.

Ratha, D., (2013), The Impact of Remittances on Economic Growth and Poverty Reduction, *Migration Policy Institute*, Washington, D.C

Sebil O Oshota and Abdulazeez A Badejo, (2015) "Impact of Remittances on Economic Growth in Nigeria: Further Evidence", *Economics Bulletin*, Volume 35, Issue 1, pages 247-258

Shera, A. and Meyer, D. (2013), Remittances and their impact on Economic Growth, *Periodica Polytechnica Social and Management Sciences*, 21(1), pp. 3-19. doi: https://doi.org/10.3311/PPso.2152.

Stojanov, R.; Němec, D.; Žídek, L. (2019), Evaluation of the Long-Term Stability and Impact of Remittances and Development Aid on Sustainable Economic Growth in Developing Countries, *Sustainability*, 11(6), 1538.

United Nations, (2017), Trends in International Migrant Stock: The 2017 Revision; United Nations Database, POP/DB/MIG/Stock/Rev.2017; Department of Economic and Social Affairs, Population Division: New York, NY, USA, 2017.

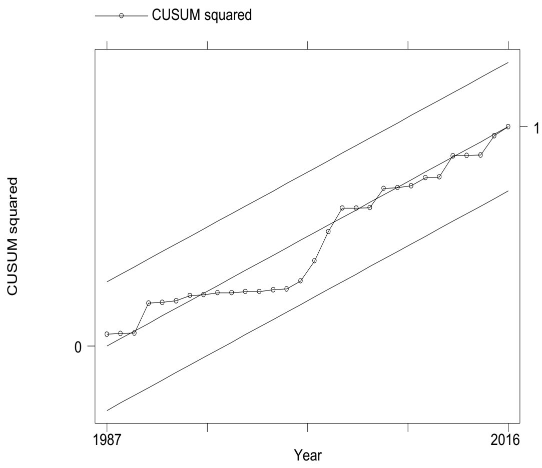
Vukenkeng A. W. and Ongo N. B. E. (2013). Do Remittances Improve the Economic Growth of Africa?, *International Journal of Financial Economics,* vol. 1(4): 119-132.

World Bank (2018), World Development indicators 2018, available at http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators , http://databank.worldbank.org/data/download/WDI_excel.zip

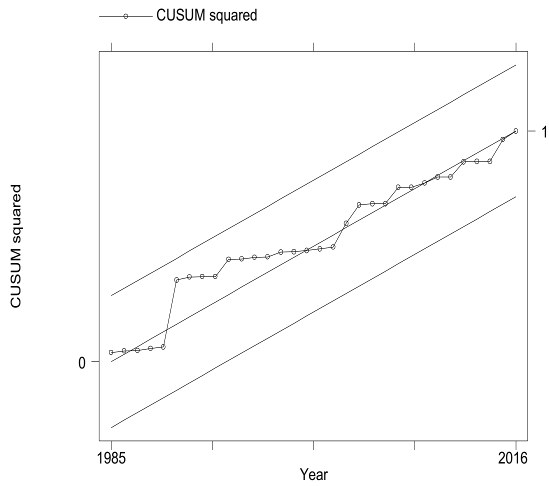
World Bank, (2016), Migration and Remittances Factbook 2016, Third Edition. Washington, DC, https://openknowledge.worldbank.org/handle/10986/23743

Ziesemer, T.H., (2012), Worker remittances, migration, accumulation and growth in poor developing countries: survey and analysis of direct and indirect effects, *Economic Modelling*, 29 (2), 103–118.

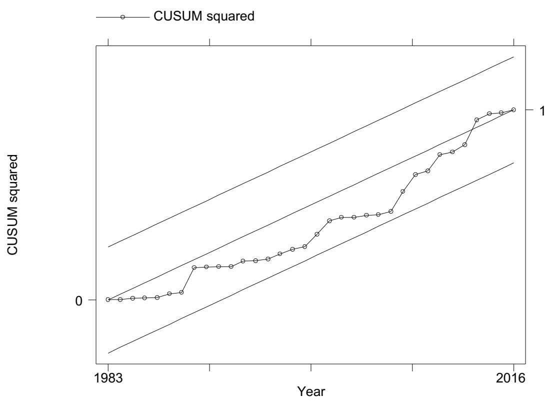
Annex



Model 1 for stability check



Model 2 for stability check



Model 3 for stability check

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 306-333
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.89

The Visegrád Group Countries' Ratings – Do the Credit Rating Agencies Make the Decisions Independently or Piggyback Themselves?

Paweł Niedziółka[1]

[1] Warsaw School of Economics

Correspondence: Paweł Niedziółka, Banking Institute, Warsaw School of Economics, Al. Niepodległości 162, 02-554 Warsaw, Poland, E-mail: pniedz@sgh.waw.pl

Abstract
The paper addresses a few questions connected with actions taken by main CRAs in relation with ratings of Visegrad Group Countries. In particular it focuses on settlement: If all CRAs are independent or follow the opinions of their competitors, whether there is one leader that in case of all analyzed countries as the first one communicates change of its opinion or at least the frequency of being the leader in all countries is the biggest, if there is relation between the behavior of the respective credit rating agency and number of rating actions taken by this agency.

Keywords: Rating, Credit Rating Agency, Sovereign Debt, Visegrad Group, Piggybacking

JEL Classifications: F34, G01, G12, G14, G23

Introduction

The rating can be defined as a universal assessment system allowing the classification of credit risk on a national and international scale (Dziawgo 2010). The rating shall be treated as an opinion issued by an independent, external, professional agency about the credit risk of a given entity or its debt instruments. The agencies communicate their judgments and opinions through market-based ratings, which are grounded on a professional analysis affected by a wide range of available information. They reduce the problem of information asymmetry on financial markets. They also make it easier for issuers to raise capital and support investors in the process of making investment decisions. Their unquestionable advantage is versatility and simplicity. A single, concise, communicative and quite commonly understood alphanumerical code is assigned to all significant elements of the credit risk associated with a given entity or issued financial instruments (Korzeb, Kulpaka, Niedziółka 2018).

The origin of the leading rating agencies dates back to the 19th century. The market of rating agencies took the form of a market structure called oligopoly in the first half of the 20th century and nowadays is dominated by "Big Three," i.e., Standard&Poor's, Moody's and Fitch Ratings which altogether account for more than 95% market share. The most important reasons for such a high concentration were significant entry barriers, low recognition of the so-called small rating agencies, supervisory and licensing policies in the United States as well as numerous mergers and acquisitions. Although the global financial crisis of 2007-2009 was not the first before which the agencies did not correct their rather optimistic assessments, their impact on the financial markets has not been limited in the post-crisis period. This applies in particular to Anglo-Saxon markets, where institutional investors seeking high diversification of portfolios are not able to replace ratings with the results of their own analyzes. The impact of credit rating agencies on financial markets is still extremely important since ratings reductions (or even changes in the outlooks), which sometimes are massive, may determine the forced sale of assets, thus affecting the decline in their prices, as well as creating problems related to obtaining financing. The largest rating agencies have been using the business model since the 1970s, in which the issuer pays for the rating. This potential source of conflict of interest together with the mentioned influence of the three leading rating agencies on investors' decisions and market conditions, make rating agencies institutions of major importance for the stability of the financial system.

Sovereign credit ratings strengthen transparency and contribute to the reduction of information asymmetry and therefore, attract inflow of foreign capital (Kaminsky, Schmukler 2002). Sovereign debt ratings, which seem to be the benchmarks for other types of external ratings, differ substantially from corporate ones. The main discrepancies are the following:

- States do not pay for ratings– therefore, conflict of interest, in fact, does not exist in this field, and these unsolicited assessments cannot be treated as inflated. One has to add that the attitude of securities regulators evolved over last 15-20 years since in the past the regulatory bodies discouraged market participants from unsolicited ratings because with them there was bound an attempt to extort and force payment of rating fee upon due diligence if ordered by the entity willing to improve its rating. So the unsolicited ratings were considered as underestimated whereas now solicited ones due to rating shopping and significantly higher levels are regarded as less reliable (Sangiorgi, Spatt 2017, p. 8),
- Usually, sovereign debt is rated by all main credit agencies, and that is why one cannot consider rating shopping (the cases of sovereign debt ratings' withdrawals are very rare and refer to small peripheral economies),
- Due to rating ceiling credit ratings granted to sovereigns play crucial role not only from the perspective of sovereign issuers but also from corporate issuers' point of view,
- Bonds issued by states are designed in a very simple way (no collateral, covenants, embedded options, issues differing from each other only by maturities, frequencies of coupon payment o way of interest calculation). Moreover, the data used by credit rating agencies, at least quantitative data, is commonly available without additional cost. Having this in mind as well as at least main assumptions of rating methodology it shall be rather easy to check the correctness of PD's calculation somehow reflected in the rating,
- Bankruptcy of state is much less probable than a corporate issuer.

This paper addresses a few questions connected with actions taken by main credit ratings agencies in relation with sovereign ratings of Visegrad Group Countries ("VGC"). In particular, it focuses on settlement:

- If all CRAs are independent or follow the opinions of their competitors,
- Whether there is one leader that in case of all analyzed countries as the first one communicates change of its opinion (in a form of rating action) on creditworthiness of the respective state treasury or at least the frequency of being the leader in all countries is the biggest,
- If there is relation between the behavior of the respective credit rating agency (leader or follower) and number of rating actions taken by this agency.

On one hand, the methodologies applied by CRAs to assign and thereafter update credit ratings for sovereigns seem to be similar in terms of scope of fields influencing the rating. On the other hand, the weights are different, as well as some determinants are qualitative and subjective. Moreover, CRAs reserve themselves the right to adjust the model output (partially based on subjectively chosen assumptions). For instance, Fitch Ratings employs so called Qualitative Overlay justifying that no model can fully capture all the relevant influences on sovereign credit worthiness. The QO allows the adjustment of +/- 2 notches for each of the four analytical pillars and overall notching adjustment ranges of +/-3 notches (Fitch Rating 2018). Since the rating criteria for sovereigns are unclear apart from studies aimed at extraction and assessment of strength of some quantitative variables affecting the final rating, one has to take into consideration factors that are not measurable. This study focuses on one of them assuming that fact (if confirmed) of equaling the rating to the one granted by another CRA is frequenter in case of some agencies than of others. Such a remark would authorize to conclude that also action of competitor is taken into account while granting the final opinion.

The study indirectly addresses also the problem of differences in quality of rating processes applied for developed and emerging market countries. Rating agencies represent quite good track record as regards developed countries but not satisfactory in emerging economies which results from underinvestment in gathering necessary information. CRAs invest not enough in assessing the credit worthiness of issuers (also sovereign) in less developed countries, and the distortion of the assessment could prove an obstacle to less developed countries as regards access to external funding. Ratings agencies can afford such unfair treatment because of rent extraction, low risk that issuers from emerging market would complain about acute assessment as well as due to the fact that conservative approach reduces potential accusation of too late downgrading (Ferri 2004).

The VGC were chosen since these countries are characterized by similar history, geopolitical location, and experienced analogous transformation process.

Literature review

The topic of this research is connected in fact with two issues: independence of rating agencies and determinants of sovereign ratings. That is why there was executed the literature query in both streams, focusing mainly on working papers devoted to ratings granted to emerging market countries called also LDC (Less Developed Countries).

Since the same information on main macroeconomic data at the same time reach Credit Rating Agencies, and other stakeholders and CRAs are not in the possession of additional information, it is understandable that sovereign ratings' decision rather follow than lead market. This situation shows the dilemma that CRAs face. On one hand they are accused for lack of reaction to market signals, on the other hand, the market expects the rating are stable and through-the-cycle. That is why the direction of changes of ratings seems to be in line with market reactions to some newly published data however, the strength of CRAs' action is biased. The announced ratings are exposed to typical forecasting errors like pro-cyclicality, underestimation of changes, and incapacity to deal with shocks (Tichy 2011).

CRAs' services may reduce information asymmetry between an issuer and investors since rating agencies use not only public information but also (or even mainly) sensitive and confidential data. In this context, one should point out the importance of credit rating agencies. Without such a form of intermediary issuers at the same time will not be able to keep in secret the sensitive data (e.g., having potentially positive impact on their performance however their disclosure cannot take place due to commercial reasons) and convince the potential investors they will be able to service newly issued debt. It depends on CRA's independence, competences, quality of methodology as well as professionalism whether the inside information is exactly reflected by the rating. The emergence of the subprime crisis eroded the reputation capital of rating agencies, and therefore, each of the factors affecting the way of transformation of internal confident information into rating became subject of detailed investigation. If it is relatively easy to verify the correctness of the models' formulas, it is rather tough to examine whether the assumptions were defined objectively or they were tuned to the expected and desirable ones. That's is why the independence and objectivism are crucial as regards the activity of credit rating agency.

The question of independence of CRAs appeared again following subprime mortgage crisis (in the context of damage of reputation of CRAs). On the other hand announcements of potential or actual downgrades of government bonds issued by U.S. and other most developed economies governments bonds were considered by market participants as steps forward redeeming the biggest credit rating agencies (Mohindra 2019). The independence, however very often references to analysts and issuers. As regards analysts their remuneration cannot be a function of agency's revenues or profit as well as an obligatory rotation of analysts' teams dedicated to a specific issuer guarantee their independence. It is considered that CRAs characterized by the conflict of interest caused by "issuer paid" business model (existing in case of solicited ratings) contributed to pushing the global financial system to the crisis (Ryan 2012, pp. 3, 10). The proposed alleviation, in this case, seems to be inter alia transparency of the process, prohibition of consulting services on financial instruments to be rated and strengthening of quality of information and algorithms applied by CRAs. All the above mentioned solutions aimed at improvement of rating's quality were worked out on the basis of IOSCO principles published before the subprime crisis, then adjusted accordingly and finally implemented in UE and USA legislation (Gennari, Bosetti 2011). An interesting mechanism the application of which shall improve the quality of ratings granted by CRAs operating in issuer-paid business model was proposed by Bongaerts (2014, p. 3). The conclusions formulated in the above mentioned working paper point out that the optimal from social point of view solution seems to be a monopolistic CRA with large mandatory co-investments, i.e., obliged to invest substantial amounts into rated assets.

Another issue affecting the independence of credit rating agency refers to the scope and weight of factor influencing rating that are non-quantifiable and result in fact from subjective assessment. In case of sovereign ratings, such aspects are taken into consideration like independent press, separation of power, civil institutions, legally enforceable property rights or compliance with the rule of law. Undoubtedly they are crucial however, it is very hard to compare them across the countries. Also, some types of democracies or models of market economy are preferred by specific rating agencies which makes sovereign rating not fully comparable (Brunner, Abdelal 2005, p. 199)

The independence of credit rating agency is tested in case of significant and/or unexpected by the market downgrades of country ratings. The main CRAs suffering from deprivation of reputation during the subprime crisis tent to be more conservative and consistent regarding country rating during the sovereign crisis. Even such economies like United States or France did not avoid such actions. The downgrades were accompanied with complains expressed by governments, accusations toward rating agencies that their methodologies were incorrect.

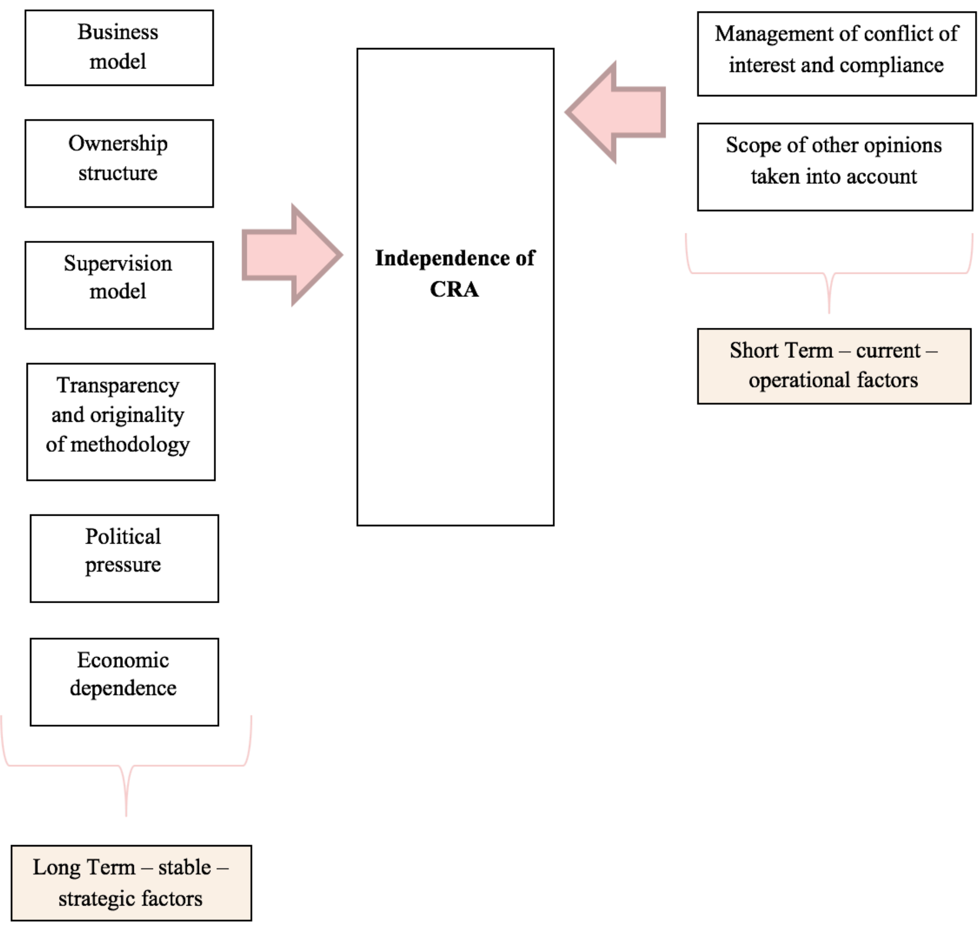
The competition among credit rating agencies has not pushed them to differentiate methodologies. Moreover, the agencies apply credit worthiness assessment models based in fact on the same philosophy and assumptions. The competition has not forced them to reframe credit risk quantification methods into open system of thought, and instead of that they still quantify the risk by use of probability distributions which have to be stable to generate comparable results. The progressive unification of approaches puts into question the issue of independence of CRAs as regards the construction of algorithms, especially having in mind pro-cyclicality of currently used models and their assumptions reflecting, in fact, inherent stability (Schroeder 2015, p. 8). Although there are some initiatives aiming a strengthening of the competition on credit rating market (creation of net of small state-owned CRAs or regulatory preferences for small CRAs) and some other agencies lay the claim to be a global player (like Chinese Dagong) it will take time to convince ratings users that above mentioned alternatives represent the comparable competences to Big Three despite the fact that Dagong's sovereign ratings methodology seems to be more conservative (Gaillard 2012) and reasonable as regards, for instance, the impact on sovereigns' creditworthiness the relation between dynamics of government debt and economy's output or fiscal revenues.

As regards economic independence, it refers to widely discussed in the marketing literature problem of value of the customer. In the simplest way, it can be identified with amount of anticipated revenues the rating agency generates from the co-operation with the client. Another issue is the concentration of clients in defined fields of activity estimated by share of revenues representing by the specific client or group of economically related entities. For the time being the practice of regulators focuses on the requirement to disclose the biggest clients (both related and non-related ones) as a list of Top 20 or all that account for more than 5% of agency revenues. Worth mentioning is also the concept of European Commission from 2008 that aims at identification of all clients having clearly higher than average contribution to the growth rate of CRA's revenues. There are not any administratively set limits of concentration; however, CRAs characterized by excessive dependence on a few clients can be subject of respective supervisory intervention (Mattarocci 2014, pp. 108 – 109). The concentration's measurement can be also carried out by more complex; however, widely used measures like HHI or Concentration Ratio (Avila, Flores, Lopez –Gallo, Marquez 2013).

One of the crucial questions that has to be asked refers to reasons that credit ratings agencies take into consideration the ratings granted by their competitors. Gomes (2015) argues that piggybacking, understood as weighing assessments of other CRAs while making the rating decision, allows to improve the precision of the rating being subject of resolution as well as decreases the cost of monitoring. Having permanently lower ratings than competitors in case of solicited credit ratings would affect diminishing interest from issuers. This, however, is not the case as regards sovereign ratings which are not paid by states. Analyzing sovereign debt ratings the author proves that probability of rating change is determined by difference between the current rating given by the agency making the decision on possible change or maintenance and ratings confirmed by other important agencies. Therefore rating changes can be predicted by the above mentioned differential. Another conclusion from averaging the assessments indicates diminishing informational value of rating as such since users of ratings (policymakers, investors as well as issuers) are not aware that true CRA's risk estimation is not reflected by the rating. Due to this simple making, the competition among CRAs fiercer will not contribute to improvement of quality of ratings. At the same time, Gomes confirms that interdependence between ratings goes beyond fundamentals. As investigated by Bhatia (2002, p. 45) "…the concept of piggybacking does not necessarily explain the upside bias in sovereign credit ratings, but may help to explain herd behavior." In view of the above mentioned opinion credit rating agencies follow not only their competitors' assessments but free ride on analyses of IMF, international banks, and other institutions engaged in sovereign debt performance.

The summary of the review of literature dedicated to the independence of credit rating agencies can therefore, illustrated by scope of factors affecting it:

Chart 1: Determinants of CRA's independence



Source: Own elaboration

Another issue albeit closely related to the problem of independency refers to determinants of CRAs' decisions. As far as the scope of factors affecting credit ratings is concerned, there have been carried out a lot studies based on different samples, time spans and by use of various methodologies. The initial investigations were dedicated to measurement of strength of impact on rating of some quantitative macroeconomic variables. Before the crisis of 2007-2009 out of qualitative variables taken into consideration only default history and economic development appeared in the role potential statistically significant determinants of sovereign credit rating.

Cantor and Packer (1996) in the preliminary study devoted to the issue of sovereign ratings' determinants considered eight economic variables as factors affecting sovereign ratings granted by Moody's and Standard & Poor's. Finally, using the multiple regression method out of these potential determinants six turned out to significant ones: GDP per capita, GDP growth, inflation, external debt, the economic development, and default history. The researchers found that leading rating agencies used similar weightages while assessing creditworthiness. Afonso (2003) using the least squares method with cross-sectional data carried out similar study on the sample of 81 countries (29 developed countries, 52 developing countries) in 2002. The results did not differ substantially from conclusions drawn by Cantor and Packer.

Rowland (2004) estimated the economic variables that determined the sovereign credit ratings and creditworthiness in July 2003 by using the least squares method with the help of data from 49 developing countries rated B- and higher. According to Rowland, GDP per capita, GDP growth rate, inflation rate, debt ratios (debt/GDP and debt/exports), debt service ratio (debt service/GDP), international reserves and openness of the economy (export/GDP) are determinants of credit rating and creditworthiness.

Afonso, Gomes, and Rother (2011) analysed the short-and-long term determinants of sovereign ratings from three main rating agencies, for the period 1995-2005 by using linear and ordered response models. They conclude that change in GDP per capita, GDP growth, government debt, and government balance have impact on sovereign credit ratings in short-term while government effectiveness, external debt, foreign reserves, and default history are long-term determinants.

Cantor and Packer (1996) pointed also out that decisions on sovereign ratings granted by the biggest rating agencies tend to move in lockstep. They proved very high correlation for Standard&Poor's and Fitch Ratings for downgrading of Greece and Spain as well as between Moody's and Standard&Poor's as regards reductions of ratings of Ireland and Portugal. It was then confirmed by Tichy (2011) who came to the conclusion that after 15 years that passed from Cantor's and Packer's research the list of macroeconomic factors influencing sovereign ratings of so called PIGS was subject to extension. Moreover, a significant part of rating's level could not be explained by quantitative fundamental determinants. Nonetheless, Tichy abandoned the identification of factors other than macroeconomic ones, default history, and economic development, which resulted in lack of explanation from 9% even up to 45% of the rating content.

Table 1: Determinants of downgrading of ratings for Greece, Ireland, Portugal, and Spain after Global Financial Crisis ("GFC")

Justification for downgrading	Cantor/Packer	Greece	Ireland	Portugal	Spain
GDP per capita	X	-	-	-	-
Inflation	X		-	-	-
External debt	X	10%	5%	6%	-
Economic development	X	-	-	-	-
Default history	X	-	-	-	-
GDP growth	-	7%	14%	24%	25%
Fiscal balance	-	7%	10%	29%	25%

Support financial sector	-	-	52%	-	25%
External balance	-	-	-	5%	-
EU-IMF programme	-	31%	-	-	-
Austerity programme	-	-	10%	18%	-
Other	-	45%	9%	18%	25%
Total		100%	100%	100%	100%

Source: Tichy G., Did Rating Agencies Boost the Financial Crisis? [in]: Lannoo K., Tichy G., ap Gwilym O., Msciandaro D., Paudyn B., Alsakka R. (2011): Credit Rating Agencies: Part of the Solution or Part of the Problem, Intereconomics, Volume 46, September/October, Number 5, p. 243.

The similarity of approaches applied by CRAs in the process of granting sovereign ratings was confirmed also in other studies. Sehgal, Mathur, Arora, and Gupta (2018, pp. 158-159) observed that despite using different models the majority of determinants of sovereign ratings are common for all main credit rating agencies, however agencies use different weightage to specific factors:

Table 2: Significant determinants of sovereign ratings

	Standard & Poor's	**Moody's**	**Fitch Ratings**
Governance indicators	X	X	X
Inflation	X	X	X
GDP per capita		X	X
GDP growth		X	X
International reserves	X		X
FDI	X		X

Source: Own elaboration based on: Sehgal S. Mathur S., Arora M., Gupta L. (2018): Sovereign ratings: Determinants and policy implications for India, IIMB Management Review 30

The above mentioned authors tried also to answer the question regarding the most reliable rating model and found Moody's the credit rating agency that has a higher percentage of correct predictions than its competitors.

Reusens and Croux (2017) used the sample of 90 countries and their ratings in the time period between 2002 and 2015 and came to the conclusion that after 2009 when the European debt crisis appeared the meaning of the financial balance, the economic development and the external debt increased substantially. Additionally, GDP growth became more important for highly indebted sovereigns as well as government debt affected materially the ratings of countries with a low GDP growth rate. The study carried out by Reusens and Croux confirmed that credit rating agencies changed their methodologies after the commence of the European debt crisis.

The review of studies dedicated to settlement of the list of determinants of sovereign ratings allows statement that despite dissimilar results (caused by different samples, methodologies and analysed periods) in case of developed countries it is feasible to justify a large portion of the rating by use of macroeconomic variables. Moreover, the strength and direction of influence is stable. This conclusion is not appropriate for emerging markets. In case of LDC, especially characterised by low income and instable political environment, it is tough to point out specific stable variables affecting the rating. This was proved inter alia in the study carried out by Pretorius and Botha (2017, pp. 560-561) who investigated African countries classified into low, lower middle, and upper middle income categories. Only in case of low- and upper-middle classes, the significance of the variables typically identified as main determinants of sovereign ratings (fundamental and macroeconomic ones) were confirmed. This was in line with results achieved by Erdem and Varlı (2014) who also explored the problem of determinants of ratings granted to countries counted to emerging markets however not dividing them into samples according to GDP or economic development criteria. They found budget balance/GDP, GDP per capita, governance indicators, and reserves/GDP the most important factors influencing ratings. Probably the conclusions will not be so unequivocal if the above mentioned differentiation is applied. Analyzing 105 countries rated by Standard & Poor's by use of Econometric Analysis of Panel Data also Yildiz and Günsoy (2017) came to the conclusion that not all countries are assessed on the basis of the same criteria. That is why, based on income differentiator, they were divided into 3 groups. The main determinants turned out to be:

- for high income countries: GDP per capita, inflation, unemployment and government debt,
- for low and medium income countries: GDP per capita, GDP growth rate, inflation, unemployment, budget balance, current account balance, and government debt.

As it was mentioned vast majority of studies dedicated to identification of factors affecting sovereign credit ratings focuses on fundamental ones. Except for indicators reflecting level of economic development and default track record relatively seldom, other qualitative variables are verified. One of the first studies resulting in confirmation of role of political and social aspects was carried by Bissoondoyal-Bheenick (2005) who employed ordered response model on the basis of 95 countries between 1995 and 1999 rated by Standard & Poor's and Moody's and division the ratings into four categories (local currency, foreign currency, bonds and bank deposits ones). The important finding from the above mentioned study is that economic and financial variables are not sufficient to explain credit ratings, as well as strength of relationship between economic indicators and rating, depends on grading level. This, in fact, means that the set of variables and their weightages vary for different categories of countries. Political stability, voice of people, corruption control, government's effectiveness, regulatory quality were also identified by Butler and Fauver (2006) as significant determinants of sovereign ratings. This was confirmed by Chee, Fah and Nassir (2015) who analysed 53 countries in the period between 2000 and 2011 and found economic freedom (besides identified in earlier studies other qualitative variables like default history and economic development indicator) as a material factor having impact on credit rating. The similar results achieved Kabadayi and Celik (2015) who investigated 19 emerging countries based on data from World Bank, IMF, Heritage Foundation and CRA websites (standard & Poor’s, Moody’s Fitch Ratings) for the period between 1993 and 2009. They chose both macroeconomic and political variables as potential determinants of sovereign ratings. Using ordered panel probit and logit analysis they found the following factors statistically significant: (i) having negative effects: external debt, inflation, current account deficit, real exchange rate, (ii) having positive effects: GDP per capita, ratio of gross domestic savings/GDP and freedom index.

The first symptoms of GFC and initially its possible and shortly afterwards actual transformation into sovereign debt crisis in line with relatively abrupt or impulsive decisions of Big Three caused questions whether fundamentals are the only determinants of ratings or the only important variables. Pressure on CRAs to reveal at least general frames of the methodologies became a trigger for widening a list of investigated factors. Analysis of 86 ratings of countries executed by Butler and Fauver (2006) confirmed that apart from factors identified inter alia by Afonso (2002 and 2003) the country's legal and political institutions played an important role as ones determining ratings. The authors constructed an index reflecting legal and political institutions and came to above mentioned conclusions controlling the fundamental and macroeconomic variables, which proved the relation was properly extracted.

After the GFC the literature concerning CRAs' drivers in the process of granting sovereign ratings concentrates on macroeconomic and public finance fundamentals as well as on judgements of credit rating agencies. The authors of studies within this scope try to answer the question how important is real impact of fundamentals on ratings if it is stable over the time and whether this factor plays comparable role across countries and regions. The researches focused on deviation of actual ratings from model predicted ones as well as on finding some generalized rules governing the decisions of CRAs. Out of studies of this kind, the research conducted by Lennkh and Moshammer (2018) is especially worth indicating. The above mentioned authors used Moody’s methodology to study the sovereign ratings of 74 countries from 2003 to 2016, dividing rating drivers info fundamental and judgement component. The results show that:

- Sovereign ratings for Latin America and Africa were on average 2-3 notches below scorecard-implied ones whereas Anglo-Saxon sovereigns exceeded their scorecard-implied rating by 1-2 notches,
- Actual ratings of higher (lower) rated sovereigns are higher (lower) than ones calculating based on the model,
- Negative fundamental developments contemporaneously determine rating downgrades whereas negative judgement in the previous year increases the likelihood of upgrade (therefore not only contemporaneous evolution of fundamentals but also previous negative judgement affects upgrades),

- Out of 29 explanatory variables, the judgement is best explained through government bond yields, real GDP growth the debt trend and interest payments relative to revenues.

The summary of results of studies dedicated to the identification of quantitative and qualitative factors influencing level of sovereign ratings is presented in Tables 3 and 4, respectively.

Table 3: Quantitative and qualitative determinants of sovereign ratings (1)

	Cantor, Packer (1996)	Afonso (2003)	Canuto, Dos Santos, Porto (2012)	Bissoondoyal-Bheenick	Butler, Fauver (2006)	Mellios, Paget-Blanc (2006)	Afonso, Gomes, Rother (2011)
Quantitative determinants							
GDP growth	X	X	X				X
Output growth							
GDP per capita	X	X	X	X		X	X
Inflation	X	X	X	X		X	
Money supply/GDP							
Investment/GDP							
Total debt/export							
Fiscal balance or Fiscal balance/GDP							
External debt	X	X					X
External debt/Total fiscal receips ratio			X				
Government income						X	
Government debt							X
Real FX rate						X	
External reserves or Reserves/GDP							X
External balance							
Gross Domestic Savings/GDP							
Export/GDP							
Debt service/GDP							
Qualitative determinants							
Economic development	X	X					
Default history	X	X	X			X	X
Commercial openess			X				
Political indicator				X	X		
Legal institutions and regulatory quality					X		
Government effectiveness					X		X
Social indicator				X			
Corruption index					X	X	
Internet users							
Economical Freedom/Freedom Index							

Source: Own elaboration based on quoted studies

Table 4: Quantitative and qualitative determinants of sovereign ratings (2)

	Rowland (2004)	Pretorius, Botha (2014)	Pretorius M., Botha I. (2017)	Chee, Fah, Nassir (2015)	Mulder, Perrelli (2001)	Erdem, Varli (2014)	Kabadayi, Celik (2015)
Quantitative determinants							
GDP growth	X	X					
Output growth					X		
GDP per capita	X		X			X	X
Inflation	X	X		X	X		X
Money supply/GDP				X			
Investment/GDP					X		
Total debt/export	X				X		
Fiscal balance or Fiscal balance/GDP					X	X	X
External debt				X			X
External debt/Total fiscal receips ratio							
Government income							
Government debt							
Real FX rate				X			X
External reserves or Reserves/GDP	X	X		X		X	
External balance		X					
Gross Domestic Savings/GDP							X
Export/GDP	X			X			
Debt service/GDP							
Qualitative determinants							
Economic development							
Default history				X	X		
Commercial openess							
Political indicator							
Legal institutions and regulatory quality			X			X	
Government effectiveness							
Social indicator							
Corruption index		X	X				
Internet users			X				
Economical Freedom/Freedom Index				X (as the first)			X

Source: Own elaboration based on quoted studies

Finally one can state that the knowledge of factors determining sovereign ratings seems to essential for policymakers and governments that would pay more attention to some hitherto treated variables, not as a priority (Sehgal, Mathur, Arora and Gupta 2018, p. 159).

Data and methodology

The research is based on aggregated and unified data referring to sovereign LT ratings in foreign currencies available on the website http://www.worldgovernmentbonds.com. The above mentioned information was randomly counterchecked with source data available on websites of so called Big Three (Standard& Poor's Global Ratings (https://www.standardandpoors.com), Moody's Corporation (https://www.moodys.com) and Fitch Ratings (https://www.fitchratings.com/site/home). The choice of Big Three is justified by the fact that no other credit rating agency has monitored all Visegrad Group countries within the approx. 20 year period. There were taken into consideration all rating actions toward Visegrad Group countries within the period between the first rating action in case of:

- Czech Republic - 10 March 1993,
- Hungary – 18 July 1989,
- Poland – 1 June 1995,
- Slovakia – 15 February 1994

and November 2018.

As a "rating action" one should understand:

- Change of rating,
- Change of rating outlook (announcement of positive or negative outlook and withdrawal of positive or negative outlook).

During the analyzed period there were taken 166 rating actions, out of which in case of:

- Czech Republic – 24,
- Hungary – 63,
- Poland – 32,
- Slovakia – 47.

The ratings were subject to comparison according to the following matrix:

Table 5: LT Rating comparison (Standard&Poor's, Moody's, Fitch Ratings)

Description	S&P	Moody's	Fitch	DBRS	Grade
Prime	AAA	Aaa	AAA	AAA	Investment
High Medium Grade	AA+	Aa1	AA+	AA(high)	
	AA	Aa2	AA	AA	
	AA-	Aa3	AA-	AA(low)	
Upper Medium Grade	A+	A1	A+	A(high)	
	A	A2	A	A	
	A-	A3	A-	A(low)	
Lower Medium Grade	BBB+	Baa1	BBB+	BBB(high)	
	BBB	Baa2	BBB	BBB	
	BBB-	Baa3	BBB-	BBB(low)	
Speculative	BB+	Ba1	BB+	BB(high)	Speculative
	BB	Ba2	BB	BB	
	BB-	Ba3	BB-	BB(low)	
Highly Speculative	B+	B1	B+	B(high)	

	B	B2	B	B	
	B-	B3	B-	B(low)	
Substantial Risk	CCC+	Caa1	CCC+	CCC(high)	
	CCC	Caa2	CCC	CCC	
	CCC-	Caa3	CCC-	CCC(low)	
Extremely Speculative	CC	Ca	CC	CC	
	C	Ca	C	C	
In Default	RD	C	RD	RD	
	SD	/	SD	SD	
	D	/	D	D	

Source: https://www.moneyland.ch/en/rating-agencies (05.12.2018)

Rating actions were classified as ‘positive’ (rating upgrade, change from negative outlook into stable one or from stable into positive) and ‘negative’ (rating downgrade, change from positive outlook into stable one or from stable into negative). The next step was to settle a time of reaction of CRA to the decision of other rating agency. There were taken into consideration 3 scenarios:

1) The decision within up to 3 months from the date of the decision of other CRA was subject to assessment,
2) The decision within up to 6 months from the date of the decision of other CRA was subject to assessment,
3) Each first decision after the decision of other CRA (no matter how long after the decision of other credit rating agency) was taken into account.

Each rating action was evaluated. In case of scenarios 1 and 2, if the decision followed the action of the other credit rating agency, the follower received negative point. If the decision meant change of the direction of rating evaluation or was made within the following (next) time span, the CRA received the positive point. One should assume in fact, two possibilities:

- Analyzing a specific entity or issue a defined credit rating agency takes into consideration the results of assessment carried out by its competitor, however that one that bases on the same info package which is the base for conclusions to be drawn by the respective CRA while granting (renewing) rating or outlook. Having in mind such an assumption, one should settle the time span within which the rating agency can rely on its competitor decision. In this research, there were chosen two time windows: 3 and 6 months,
- Before the decision concerning rating or outlook, the credit rating agency takes into consideration both the latest decisions of its competitors in the sense of direction as well as level of ratings given by other CRAs. This approach is covered by the scenario 3.

The advantages and disadvantages of approaches reflected by specified scenarios are outlined in the Table 6:

Table 6: Advantages and disadvantages of methods of identification a herding behavior of credit rating agencies applied in the research

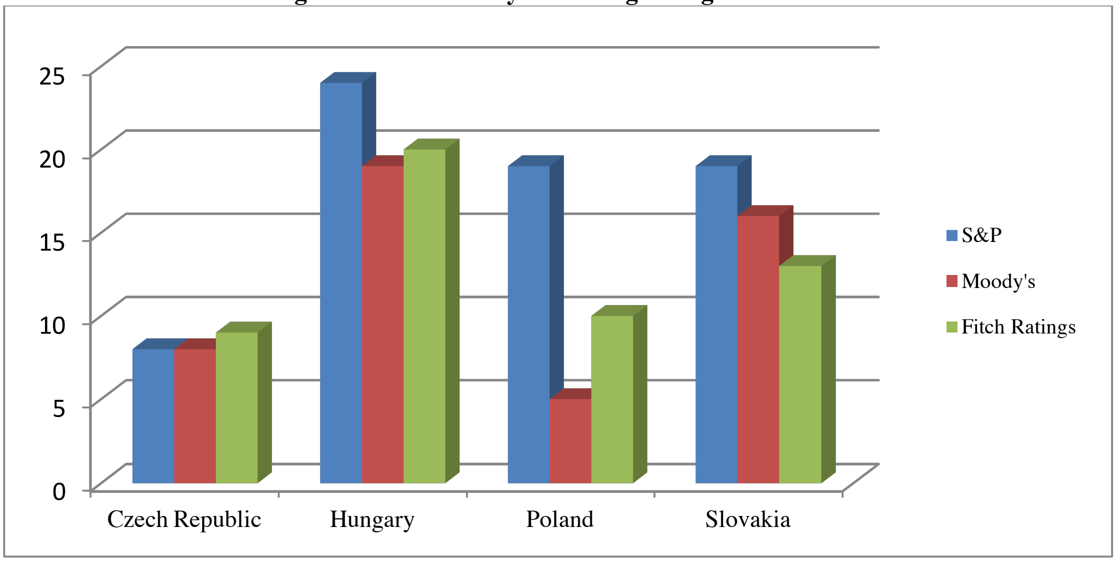
	Advantages	Disadvantages
3/6 month time span	**1.** Defined maximum time a reaction – assumption that a decision of a specific CRA is a reaction to a competitor’ decision **2.** Within the time span decisions are made on the same info package (at least macroeconomic variables)	Any decision made even a few days after the lapse of the time span treated as independent
No time span (the latest rating decision of the competitor as a benchmark)	"Lookback" approach applied, i.e., assumption that making rating decision CRA takes into consideration assessment of competitors (in sense of level and direction of change)	Sometimes lapse a lot of time from the latest competitors’ decision (different info packages being bases for decisions)

Source: Own elaboration

Results

As presented below, there are substantial differences as regards the number of rating decisions made by defined CRAs:

Chart 2: Number of rating decisions made by CRAs regarding VGC



Source: Own elaboration

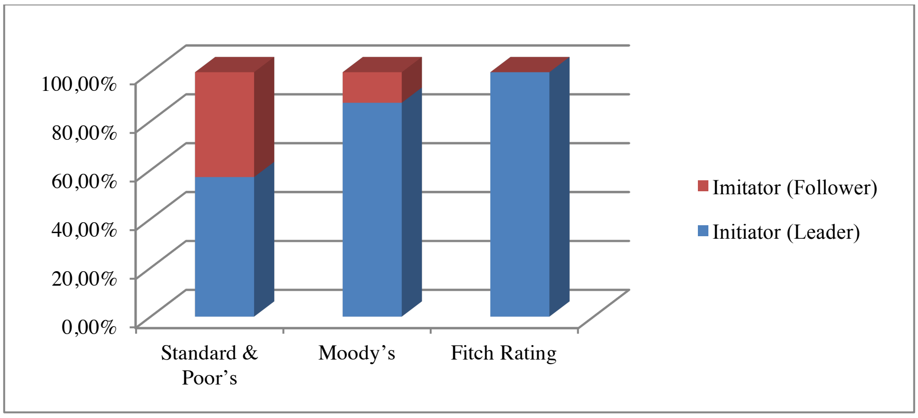
And therefore, one has to standardize the approach aimed at valuation the scale of piggy backing. That is why there were identified both actions that could be classified as initiating the chain of changes (CRA as a leader of alteration of assessment) and following the decision made by another rating agency (CRA as imitator of other CRAs' resolutions). Then it was calculated the share of steps assumed as respectively following and initiating ones:

Table 7: Czech Republic – reactions of CRAs within up to 3M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	57,1%	42,9%
Moody's	87,5%	12,5%
Fitch Rating	100,0%	0,0%

Source: Own elaboration

Chart 3: Leader – Follower decisions' structure (Czech Republic – 3M time span)



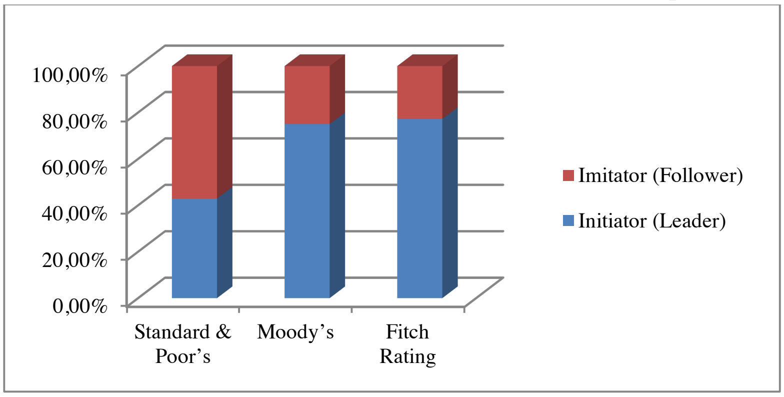
Source: Own elaboration

Table 8: Czech Republic – reactions of CRAs within up to 6M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	42,9%	57,1%
Moody's	75,0%	25,0%
Fitch Rating	77,2%	22,8%

Source: Own elaboration

Chart 4: Leader – Follower decisions' structure (Czech Republic – 6M time span)



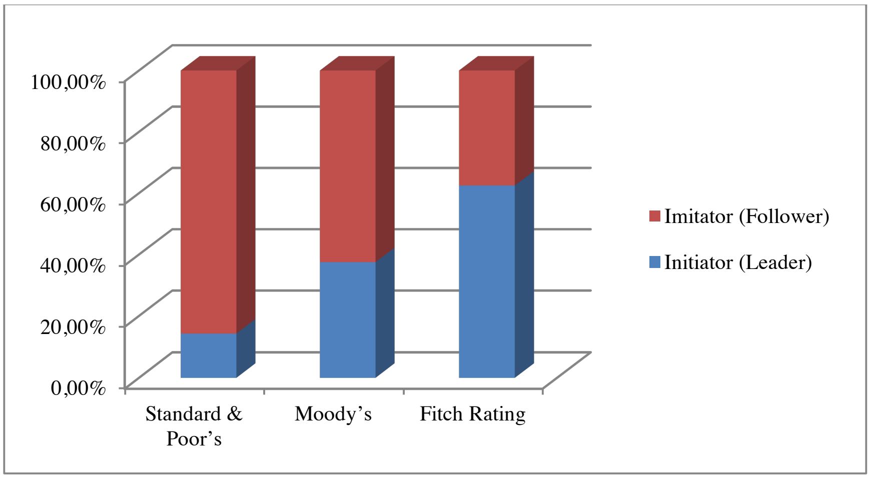
Source: Own elaboration

Table 9: Czech Republic – reactions of CRAs – no time span defined (lookback approach)

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	14,3%	85,7%
Moody's	37,5%	62,5%
Fitch Rating	62,5%	37,5%

Source: Own elaboration

Chart 5: Leader – Follower decisions' structure (Czech Republic – No time span)



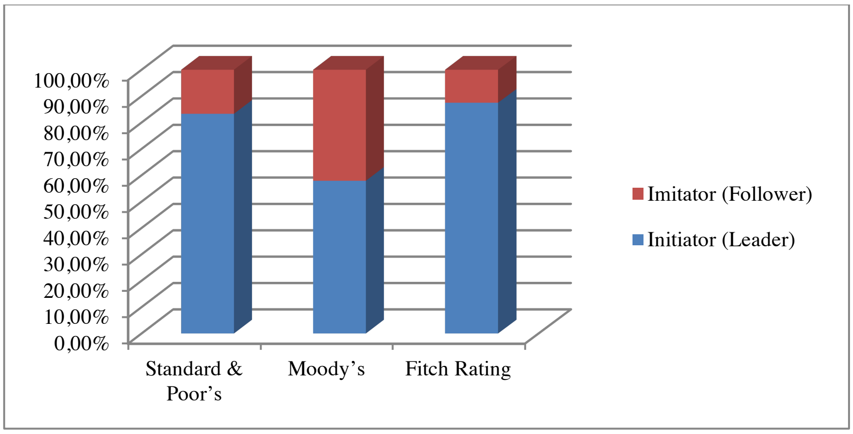
Source: Own elaboration

Table 10: Hungary – reactions of CRAs within up to 3M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	83,3%	16,7%
Moody's	57,9%	42,1%
Fitch Rating	87,5%	12,5%

Source: Own elaboration

Chart 6: Leader – Follower decisions' structure (Hungary – 3M time span)



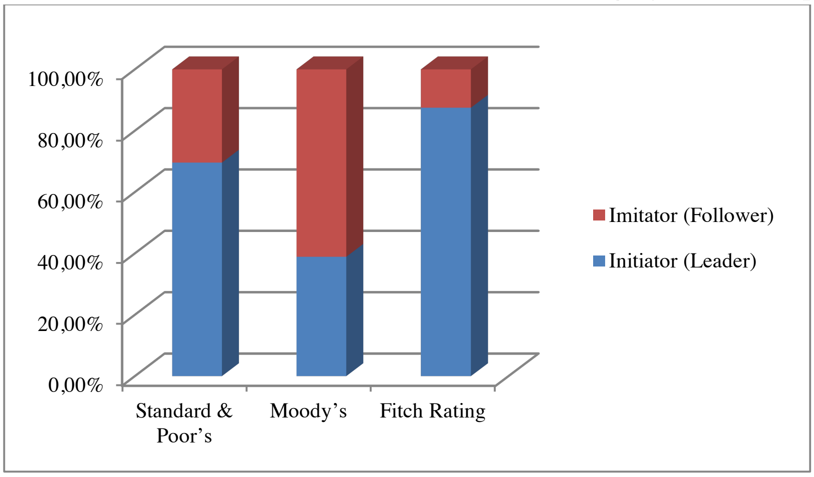
Source: Own elaboration

Table 11: Hungary – reactions of CRAs within up to 6M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	69,6%	30,4%
Moody's	38,9%	61,1%
Fitch Rating	87,5%	12,5%

Source: Own elaboration

Chart 7: Leader – Follower decisions' structure (Hungary – 6M time span)



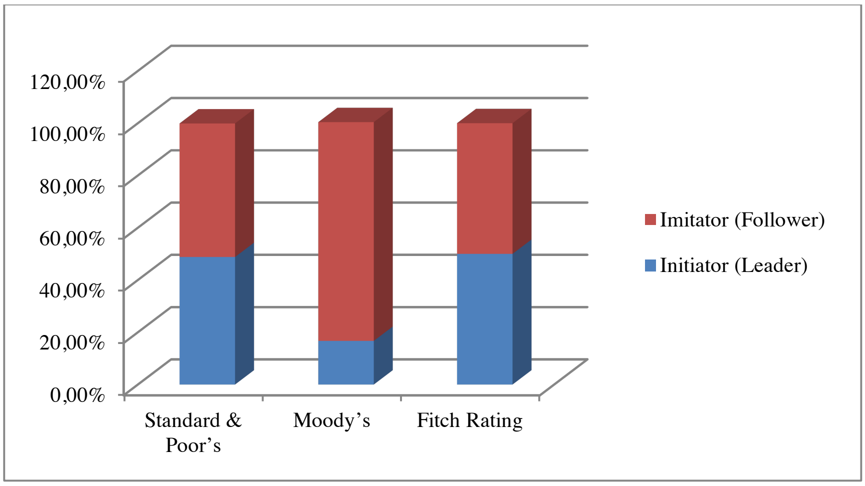
Source: Own elaboration

Table 12: Hungary – reactions of CRAs – no time span defined (lookback approach)

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	48,8%	51,1%
Moody's	16,7%	83,7%
Fitch Rating	50,0%	50,0%

Source: Own elaboration

Chart 8: Leader – Follower decisions' structure (Hungary – No time span)



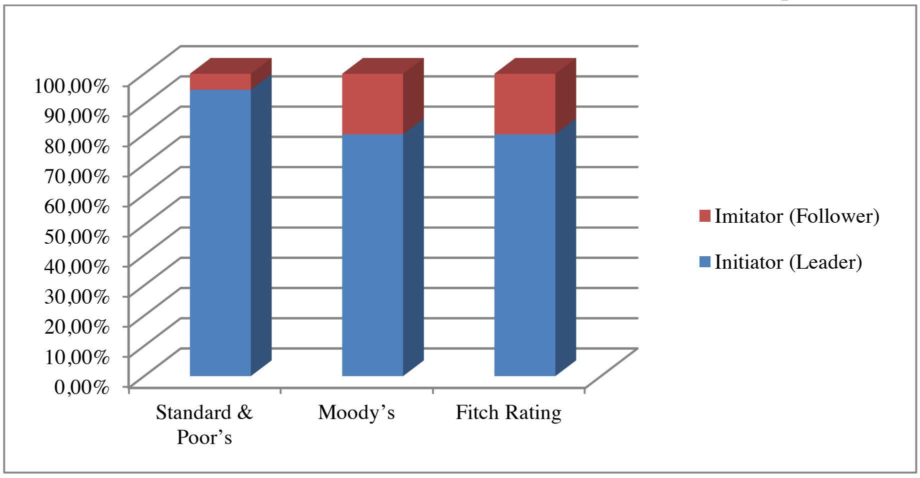
Source: Own elaboration

Table 13: Poland – reactions of CRAs within up to 3M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	94,7%	5,3%
Moody's	80,0%	20,0%
Fitch Rating	80,0%	20,0%

Source: Own elaboration

Chart 9: Leader – Follower decisions' structure (Poland – 3M time span)



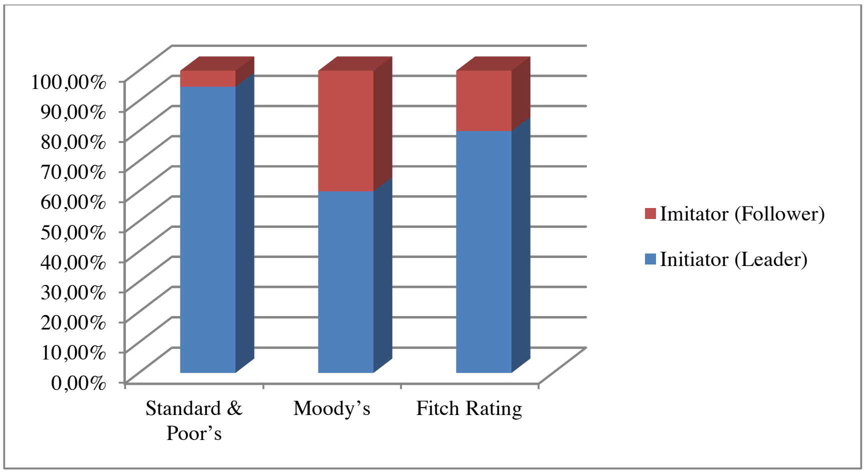
Source: Own elaboration

Table 14: Poland – reactions of CRAs within up to 6M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	94,7%	5,3%
Moody's	60,0%	40,0%
Fitch Rating	80,0%	20,0%

Source: Own elaboration

Chart 10: Leader – Follower decisions' structure (Poland – 6M time span)



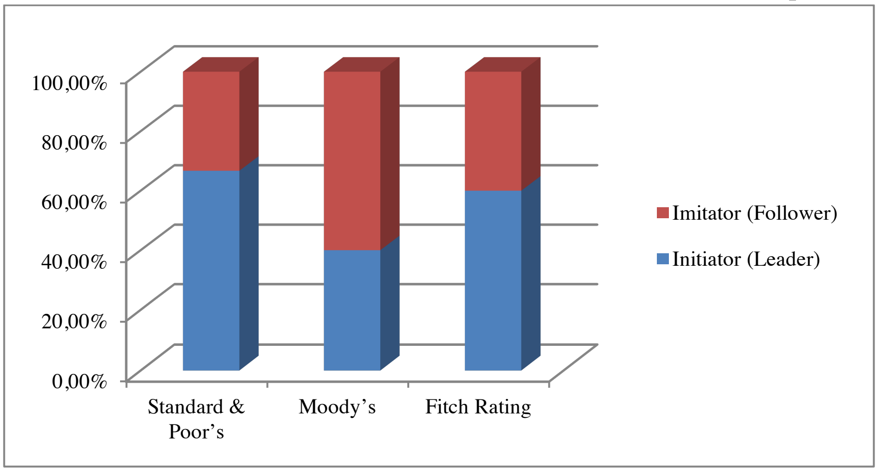
Source: Own elaboration

Table 15: Poland– reactions of CRAs – no time span defined (lookback approach)

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	66,7%	33,3%
Moody's	40,0%	60,0%
Fitch Rating	60,0%	40,0%

Source: Own elaboration

Chart 11: Leader – Follower decisions' structure (Poland – No time span)



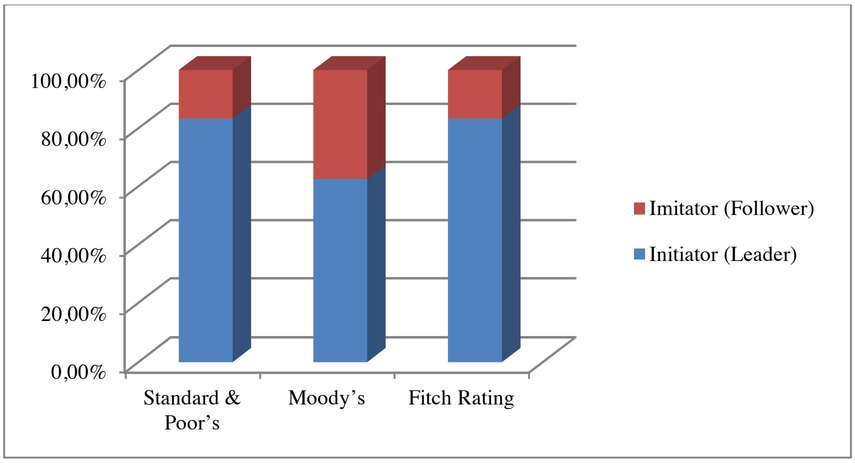
Source: Own elaboration

Table 16: Slovakia – reactions of CRAs within up to 3M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	83,3%	16,7%
Moody's	62,5%	37,5%
Fitch Rating	83,3%	16,7%

Source: Own elaboration

Chart 12: Leader – Follower decisions' structure (Slovakia– 3M time span)



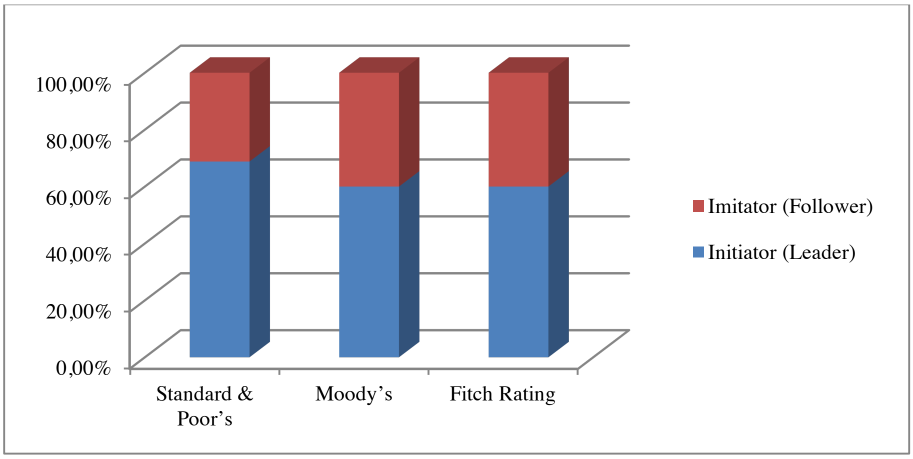
Source: Own elaboration

Table 17: Slovakia – reactions of CRAs within up to 6M time span

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	68,8%	31,2%
Moody's	60,0%	40,0%
Fitch Rating	60,0%	40,0%

Source: Own elaboration

Chart 13: Leader – Follower decisions' structure (Slovakia– 6M time span)



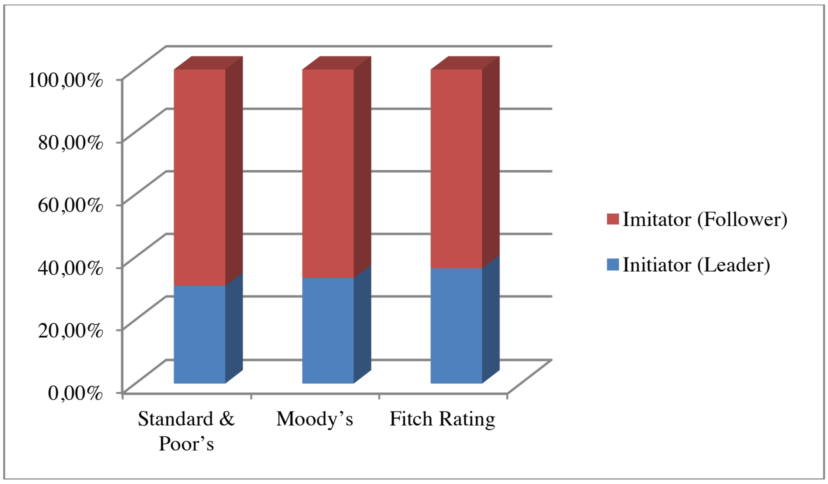
Source: Own elaboration

Table 18: Slovakia – reactions of CRAs – no time span defined (lookback approach)

	Initiator (Leader)	Imitator (Follower)
Standard & Poor's	30,8%	69,2%
Moody's	33,3%	66,7%
Fitch Rating	36,4%	63,6%

Source: Own elaboration

Chart 14: Leader – Follower decisions' structure (Slovakia– No time span)



Source: Own elaboration

Table 19: Summary of results

	Time span up to 3M	Time span up to 6M	Lookback approach
Czech Republic			
Standard & Poor's	3	3	3
Moody's	2	2	2
Fitch Ratings	1	1	1
Hungary			
Standard & Poor's	2	2	2
Moody's	3	3	3
Fitch Ratings	1	1	1
Poland			
Standard & Poor's	1	1	1
Moody's	2	3	3
Fitch Ratings	2	2	2
Slovakia			
Standard & Poor's	1	3	3
Moody's	3	1	1
Fitch Ratings	1	1	1

Legend:
1 – The highest percentage of leading decisions in total of leading and following ones among all CRAs
2 - The medium percentage of leading decisions in total of leading and following ones among all CRAs
3 - The lowest percentage of leading decisions in total of leading and following ones among all CRAs

Source: Own elaboration

Conclusions

The research allowed to position the main credit rating agencies as far as the criterion of independence is concerned. Assuming the change of rating or outlook in the same direction as it was done by the competitor is treated as a decision somehow imitating the competitor, the conclusions seem to be the following:

- Despite usage of different methodologies in case of all countries, the results allow unanimously for indication of the leader (the CRA that in the hghest share of decisions is the one presenting new and different from the previous ones assessments). In case of Czech Republic, Slovakia and Hungary it is Fitch Ratings whereas, for rating of Poland, S&P's opinions seem to be the most important.
- As regards the identification of the follower it is quite clear in case of Czech Republic (S&P), Hungary (Moody's) and Poland (Moody's)
- Even limiting the research only to four 4 neighboring countries having similar history and representing suchlike level of economic development one is not able to point out one credit rating agency which analyses

and assessments are benchmarks or patterns for other agencies in case of all countries. The leadership is therefore heterogenic,
- There is no relation between number of rating decisions and the behavior of the specific credit rating agency, e.g., it is not the case that for initiator (leader) makes the highest or the lowest number of decision during the verified period (Czech Republic – 25 years, Hungary – 29 years, Poland – 23 years and Slovakia – 24 years).

It is worth also noticing that setting up defined dates of publishing the sovereign ratings (twice or three times a year) solves the problem of unexpected rating actions, however simultaneously creates suspicion that CRAs presenting their opinions after publications of their competitors' rating may be accused of piggy backing. Therefore one should think over the modification of the up-to-date standards toward introduction an obligation to publish assessments (not only ratings but outlooks as well) on the same dates, if possible also on the frequenter basis (3-4 times a year). Since the main credit rating agencies despite the various approaches tend to follow similar rating procedures, another postulate appears (IOSCO 2003, p. 5). In order to foster differentiation of approaches, the methodologies shall not be revealed to the public however, without any restriction for the supervisory body to assess it. Simultaneously it is important so that the actions of supervisory body would not result in unification of methodologies.

References

Afonso A., 2002, Understanding the Determinants of Government Debt Ratings: Evidence for the Two Leading Agencies, Lisbon, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.6945&rep=rep1&type=pdf

Afonso A., 2003, Understanding the determinants of sovereign debt ratings: Evidence for the two leading agencies, Journal of Economics and Finance, 27 (1), pp. 56-74

Afonso A., Gomes P. M., Rother P., 2011, Short and long-run determinants of sovereign debt credit ratings, International Journal of Finance & Economics, 16 (1), pp. 1-15

Avila F., Flores E., Lopez –Gallo F., Marquez J., 2013, Concentration indicators: Assessing the gap between aggregate and detailed data, Bulletin No 36, https://www.bis.org/ifc/publ/ifcb36aj.pdf

Bissoondoyal-Bheenick E., 2005, An analysis of the determinants of sovereign ratings, Global Finance Journal, 15 (3), pp. 251 – 280.

Bongaerts D., 2014, Alternatives for Issuer-paid Credit Rating Agencies, ECB, Working Paper Series No 1703, August

Brunner Ch. M., Abdelal R., 2005, To Judge Leviathan: Sovereign Credit Ratings, National Law, and the World Economy, Journal of Public Policy, No 25, Vol. 2, Cambridge University Press

Butler A. W., Fauver L., 2006, Institutional environment and sovereign credit ratings, Financial Management, 35 (3), pp. 53-79

Cantor R., Packer F., 1996, Determinants and impact of sovereign credit ratings, in: FRBNY Economic Policy Review, Vol. 2, No. 2, pp. 37-53

Chee S. W., Fah Ch. F., Nassir A. M, 2015, Macroeconomic Determinants of Sovereign Credit Ratings, Canadian Center of Science and Education, International Business Research Vol. 8 No. 2, pp. 42-50, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.689.1080&rep=rep1&type=pdf

Dziawgo D., 2010, Credit rating na międzynarodowym rynku finansowym, PWE, Warszawa

Erdem O., Varlı Y., 2014, Understanding the sovereign credit rating of emerging markets. Emerging Market Review, 20, pp. 42-57

Fitch Ratings, 2018, Sovereign Rating Criteria. Master Criteria, https://www.fitchratings.com/site/re/10037181, 18 July

Ferri G., 2004, more analysts, better ratings: do rating agencies invest enough in less developed countries? Journal of Applied Economics, Vol. VII, No. I (May 2004), 77-98

Gaillard N. (2012): A Century of Sovereign Ratings, Springer Sciences + Business Media, LLC

Gennari F., Bosetti L., 2011, The Governance of Credit Rating agencies in the European Regulation, International Journal of Contemporary Business Studies, Vol. 2, No 4. April 2011

Gomes P., 2015, Do credit rating agencies piggyback? Evidence from sovereign debt ratings, Working Papers

Hu X., Huang H., Pan Z., Shi J., 2017, Information asymmetry and credit rating: A quasi-natural experiment from China, SSRN Electronic Journal, DOI: 10.2139/ssrn.3042425

IOSCO, 2003, Report on the Activities of Credit Rating Agencies, https://www.iosco.org/library/pubdocs/pdf/IOSCOPD153.pdf

Kabadayi B., Celik A. A., 2015, Determinants of Sovereign Ratings in Emerging Countries: A Qualitative, Dependent Variable Panel Data Analysis, International Journal of Economics and Financial Issues, 2015, 5 (3), pp. 656-662.

Kaminsky G. L., Schmukler S. L., 2002, Emerging market instability: do sovereign ratings affects country risk and stock returns? World Bank Policy Research Working Paper, 2678

Korzeb Z., Kulpaka P., Niedziółka P., 2019, Deoligopolizacja rynku agencji ratingowych oraz inne inicjatywy na rzecz poprawy jakości ratingów zewnętrznych w kontekście oddziaływania agencji ratingowych na stabilność finansową, Materiały i Studia nr 333, NBP, Warszawa.

Lennkh R. A., Moshammer E., 2018, Sovereign Ratings: An Analysis of the Degree, Changes and Source of Moody's Judgement, ESM, Working Paper Series No 27, February

Mattarocci G., 2014, The Independence of Credit Rating Agencies. How Business Models and Regulators interact, Elsevier

Mellios C., Paget-Blanc E., 2006, Which factors determine sovereign credit ratings? The European Journal of Finance, 12, pp. 361-377

Mohindra N., 2019, Credit rating agencies cautiously seeking greater independence, https://www.fraserinstitute.org/article/credit-rating-agencies-cautiously-seeking-greater-independence-appeared-financial-post (24.01.2019)

Moody's, 2018, Procedures and Methodologies Used to Determine Credit Ratings, https://www.moodys.com/sites/products/ProductAttachments/Exhibit2.pdf

Mulder C. Perrelli, R., 2001, Foreign credit ratings for emerging market economies. IMF Working Paper No 191

Pretorius M., Botha I., 2014, A Panel Ordered Response Model for Sovereign Credit Ratings in Africa, ERSA working paper 464, https://econrsa.org/2017/wp-content/uploads/working_paper_464.pdf

Pretorius M., Botha I., 2017, The Determinants of Sovereign Credit Ratings in Africa: A Regional Perspective [in]: Tsounis N, Vlachvei A. (eds.): Advances in Applied Economic Research, Springer, Cham, pp. 549-563.

Reusens P., Croux Ch., 2017, Sovereign credit rating determinants: A comparison before and after the European debt crisis, Journal of Banking & Finance, 2017, vol. 77, Issue C, pp. 108-121.

Rowland P., 2004, Determinants of Spread, Credit Ratings and Creditworthiness for Emerging Market Sovereign Debt: A Follow-Up Study Using Pooled Data Analysis, Banco de la República, Working Paper 296

Ryan, J., 2012, The Negative Impact of Credit Rating Agencies and Proposals for Better Regulation, Stiftung Wissenschaft und Politik (SWP) Working Paper, 1. Research Division EU Integration, German Institute for International and Security Affairs, Berlin

Sangiorgi F., Spatt Ch., 2017, The Economics of credit Rating Agencies, Foundations and Trends® in Finance, Vol. 12, Issue 1

Schroeder S. K., 2015, The case for public credit rating agencies. Interview with S. K. Schroeder, the author of monograph: Public Credit Rating Agencies: Increasing Capital Investment and Lending Stability in Volatile Markets, (New York: Palgrave Macmillan, 2015), World Economics Association Newsletter 5(5), October, https://www.worldeconomicsassociation.org/files/Issue5-5.pdf

Sehgal S. Mathur S., Arora M., Gupta L., 2018, Sovereign ratings: Deterinants and policy implications for India, IIMB Management Review (2018) 30, pp. 140-159.

Tichy G., Did Rating Agencies Boost the Financial Crisis? [in]: Lannoo K., Tichy G., ap Gwilym O., Msciandaro D., Paudyn B., Alsakka R., 2011, Credit Rating Agencies: Part of the Solution or Part of the Problem, Intereconomics, Volume 46, September/October, Number 5, pp. 232 – 262.

Yildiz Ü., Günsoy B., 2017, Macroeconomics Determinants of Sovereign Credit Ratings: Panel Data Analysis, International Journal of Business and Social Science Volume 8, No. 11, November

Appendix 1

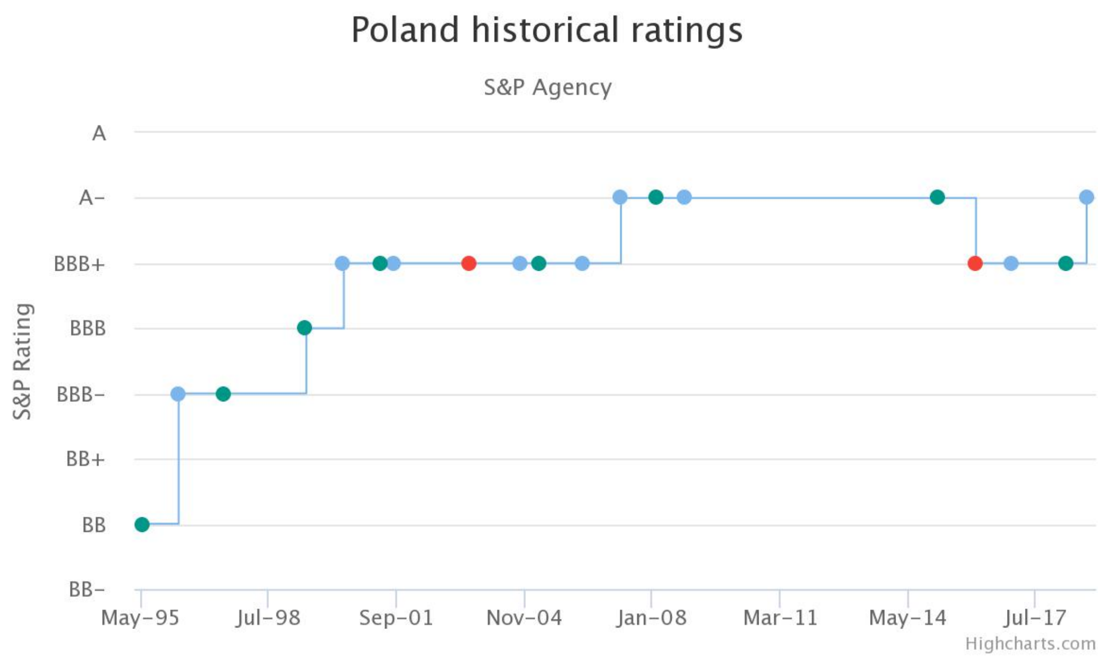
Visegrad Group countries rating evolution

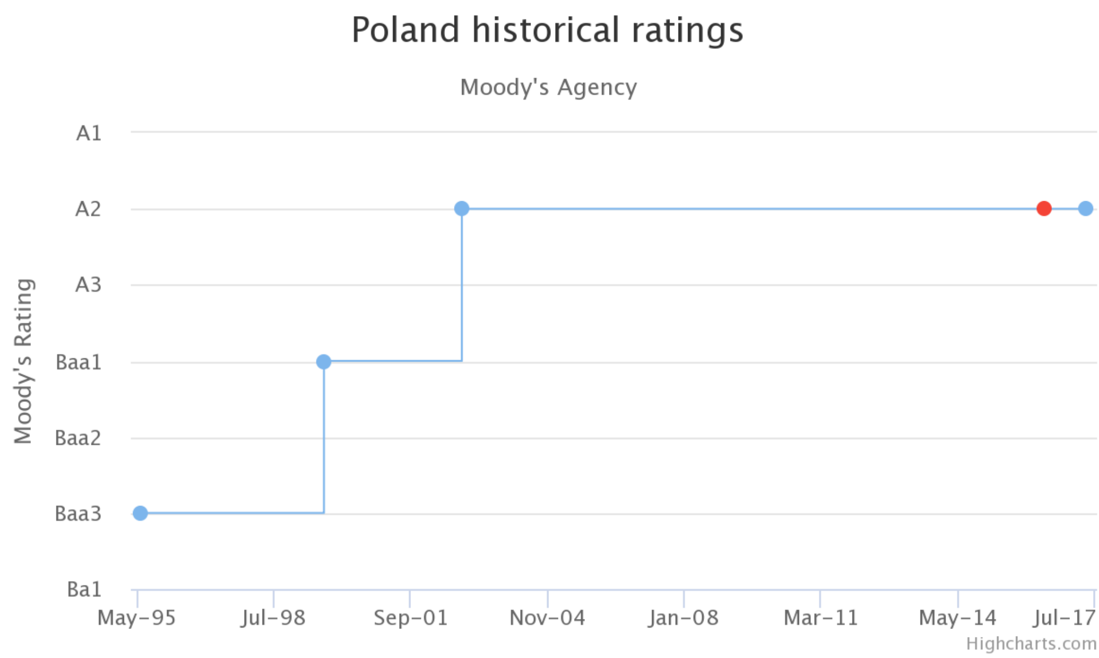
Legend:

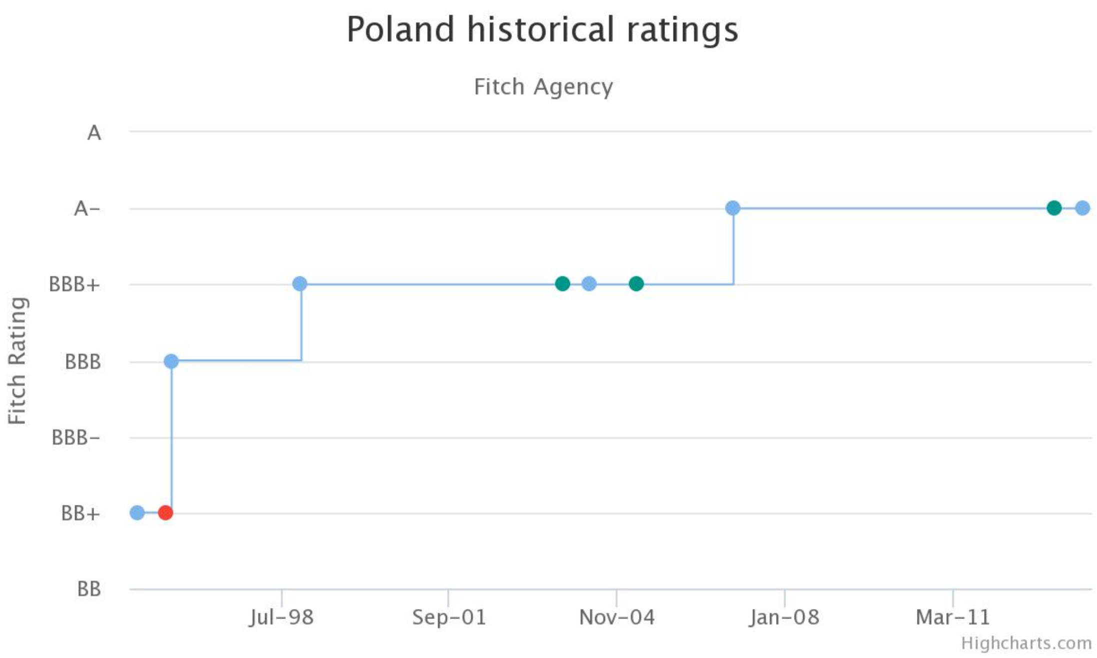
- positive outlook assigned by the CRA

- negative outlook assigned by the CRA

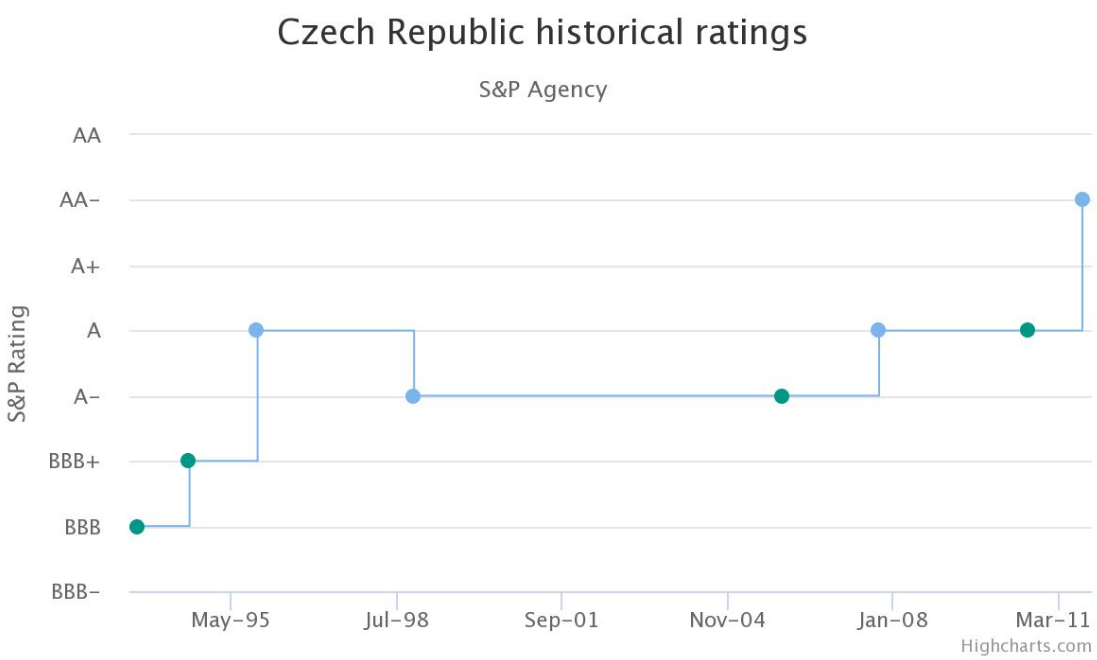
- change of rating made by the CRA

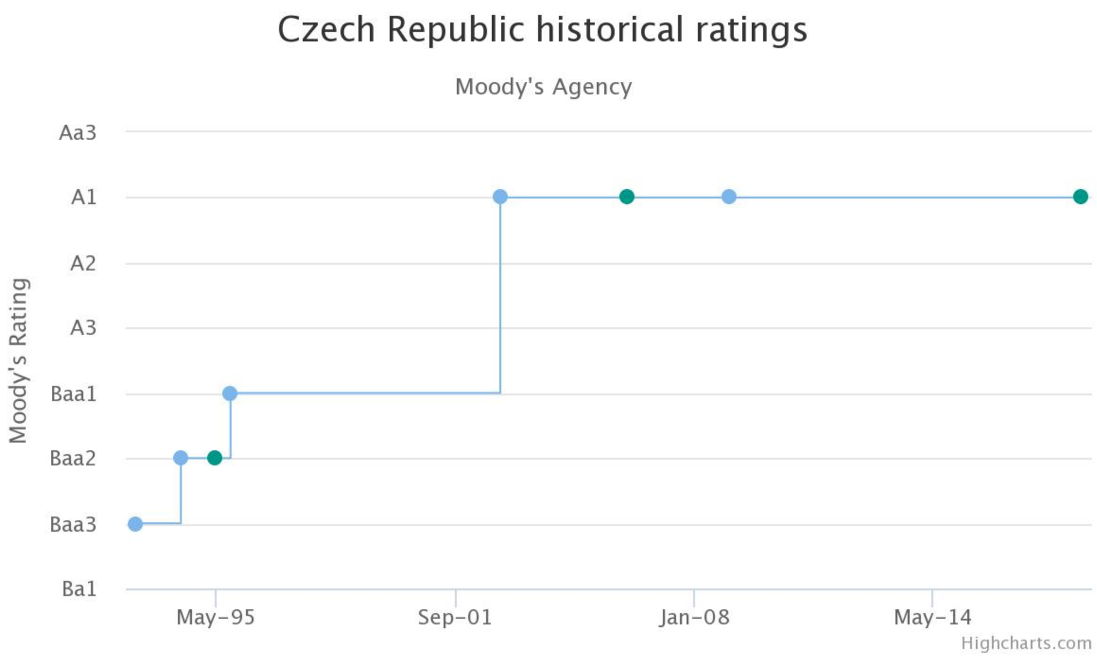


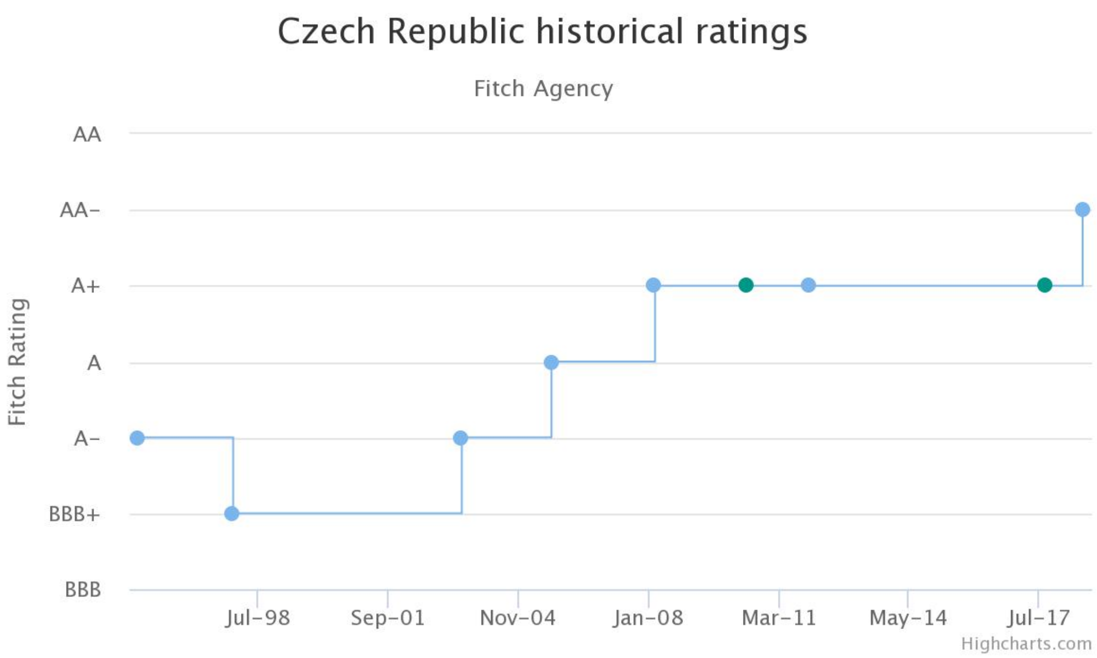




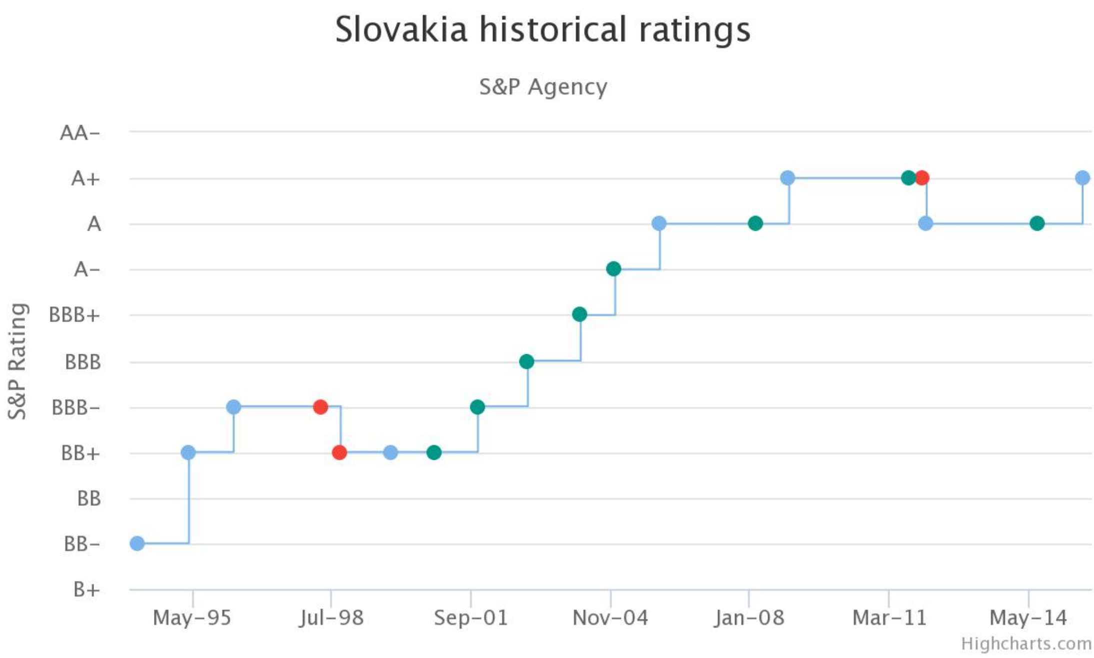
Source: http://www.worldgovernmentbonds.com/credit-rating/poland/

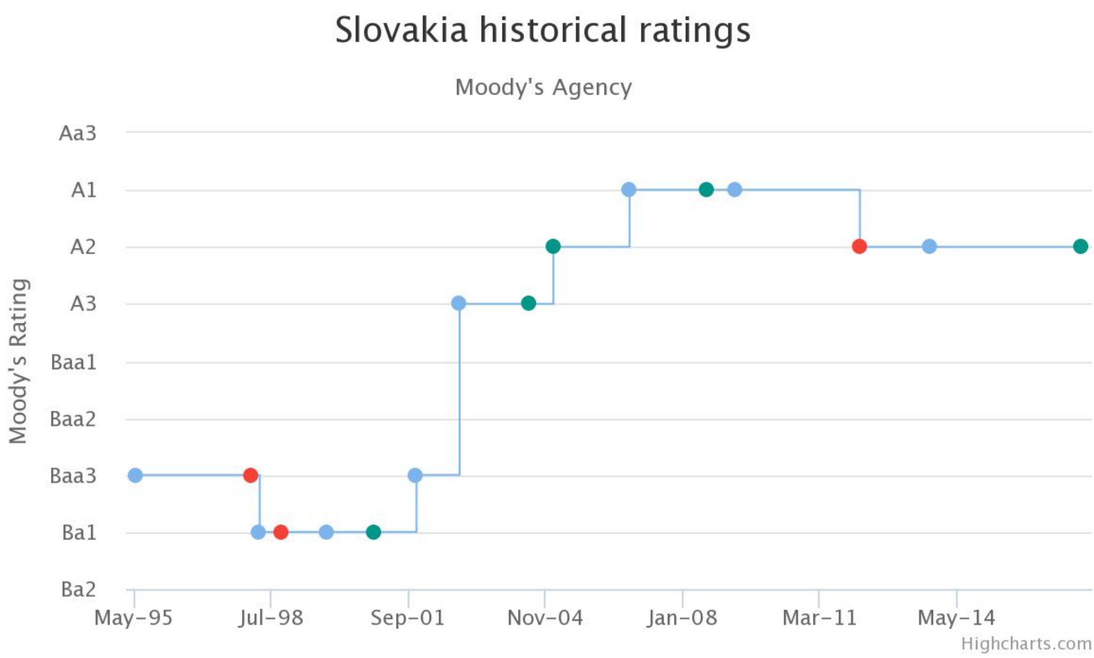


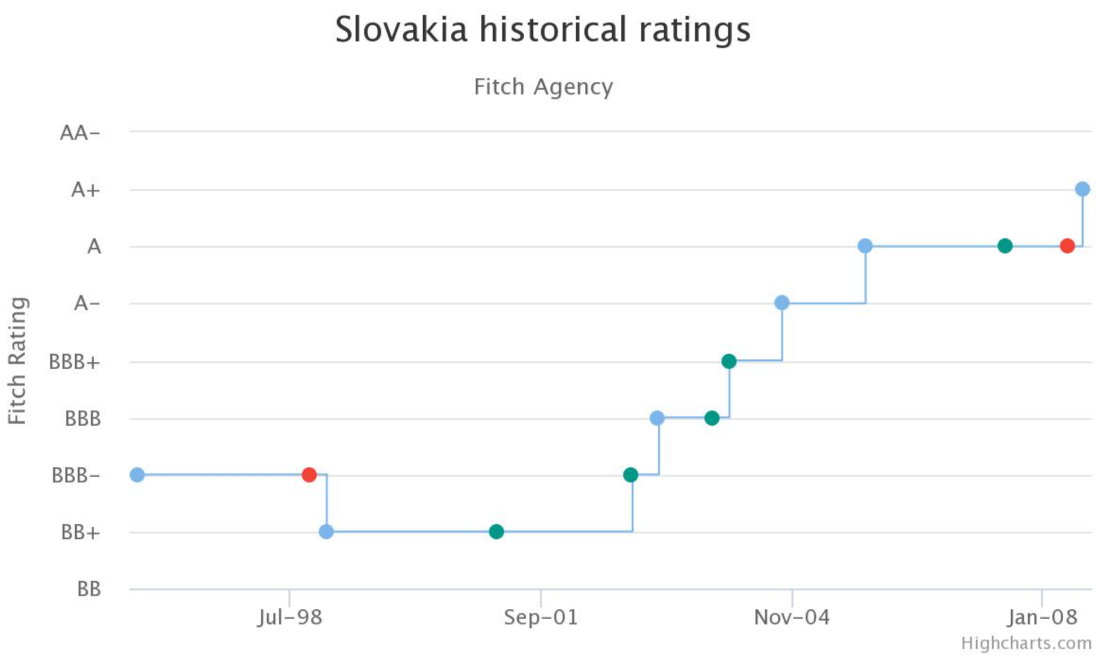




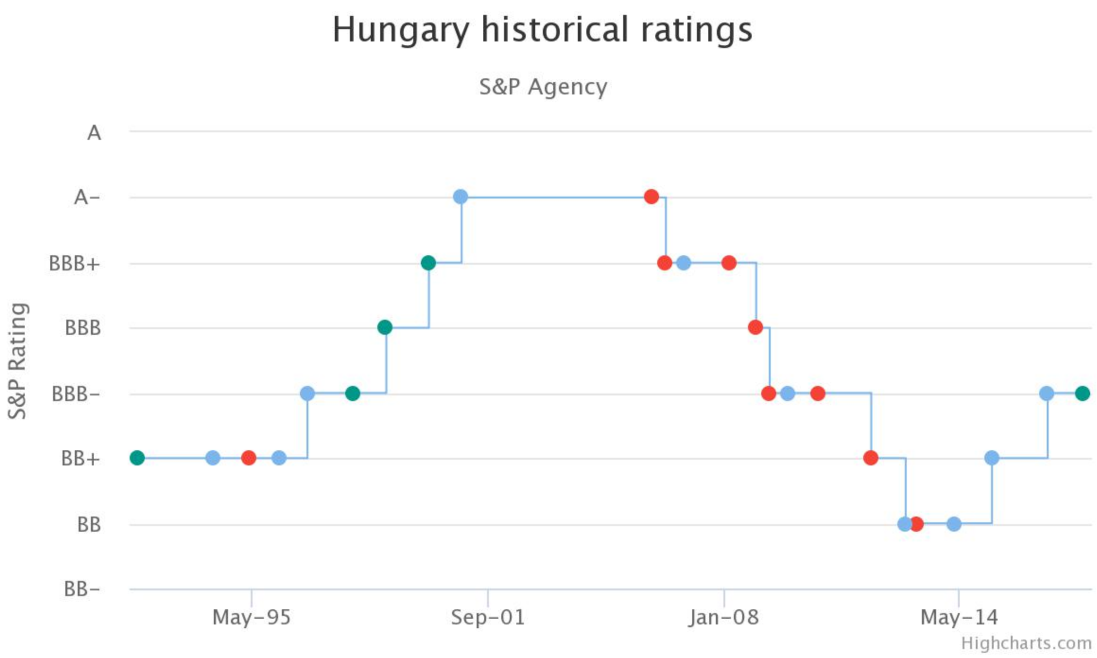
Source: http://www.worldgovernmentbonds.com/credit-rating/czech-republic/

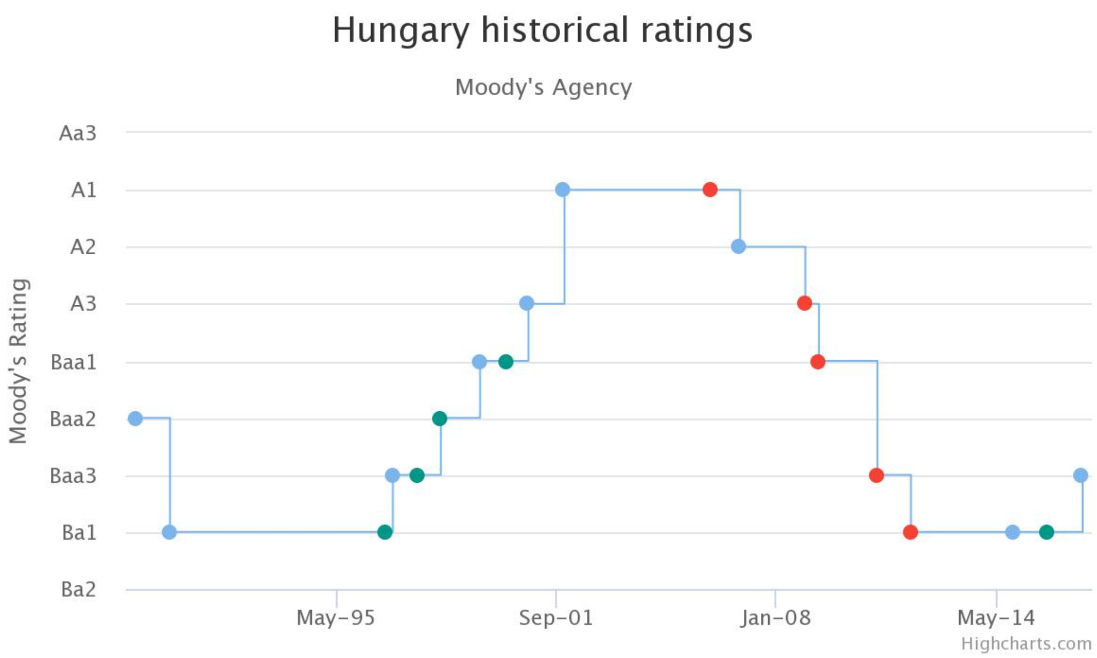

Slovakia historical ratings
S&P Agency
S&P Rating
AA−
A+
A
A−
BBB+
BBB
BBB−
BB+
BB
BB−
B+
May−95
Jul−98
Sep−01
Nov−04
Jan−08
Mar−11
May−14
Highcharts.com

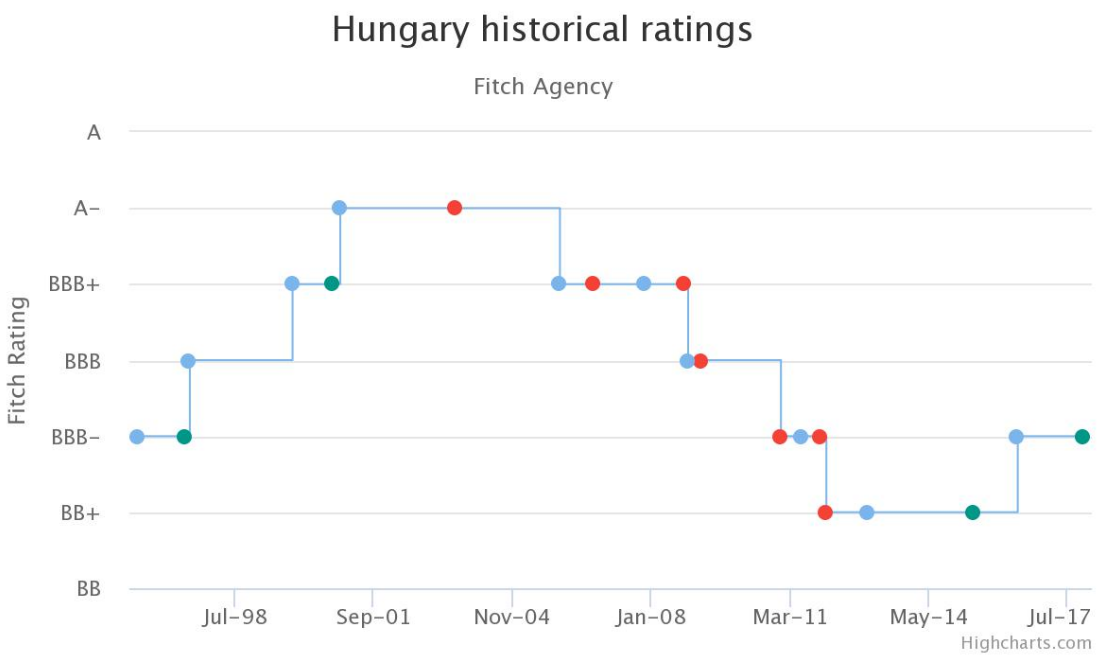

Slovakia historical ratings
Moody's Agency
Moody's Rating
Aa3
A1
A2
A3
Baa1
Baa2
Baa3
Ba1
Ba2
May−95
Jul−98
Sep−01
Nov−04
Jan−08
Mar−11
May−14
Highcharts.com



Source: http://www.worldgovernmentbonds.com/credit-rating/slovakia/


Hungary historical ratings
S&P Agency
S&P Rating
A
A-
BBB+
BBB
BBB-
BB+
BB
BB-
May-95
Sep-01
Jan-08
May-14
Highcharts.com


Hungary historical ratings
Moody's Agency
Moody's Rating
Aa3
A1
A2
A3
Baa1
Baa2
Baa3
Ba1
Ba2
May-95
Sep-01
Jan-08
May-14
Highcharts.com



Source: http://www.worldgovernmentbonds.com/credit-rating/hungary/

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 334-344
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.90

Competitiveness Monitor in Measuring the Competitiveness Level of Tourist Villages in Indonesia

Komsi Koranti[1], Muhamad Yunanto[2], Henny Medyawati[3]

[1,2,3] Faculty of Economics, Gunadarma University

Abstract
The tourism sector is expected to be the savior of the economy in Indonesia, amid the weakening rupiah exchange rate. This research was conducted with the aim to measure the level of competitiveness of tourist villages in Indonesia. This research is important because of the contribution it makes to the tourism village development which is one of the tools to alleviate poverty in rural areas. Tourism village communities are required to play an active role in the village tourism business, in order to improve their own welfare using their own potential and capabilities. The study was conducted in the village of Ngrawan, Semarang Regency, Indonesia. The Competitiveness Monitor, built by the World Travel and Tourism Council, is the analytical tool used to measure the level of tourism competitiveness in this study. The measurements used in the Competitiveness Monitor consist of the Tourism Participation Index, Purchasing Power Parity, Infrastructure Development Indicators, Environment Indicators, Technology Advancement Indicators, Human Resources Indicators, Open Indicators, and Social Development Indicators. These indicators are then used as the basis for mapping the tourist village competitiveness index. The results of the study indicate that the tourist village of Ngrawan occupies a top position, among other tourist villages. This is evidenced by its ranking position based on the tourist village attributes. These attributes include product services that affect customers. However, the products are not what customer's look for, so, customers tend to be dissatisfied. The attributes that are considered superior in the tourist village of Ngrawan, are the Openness Indicator and Social Development Indicator. Nevertheless, the village is low in value with attributes relate to Technology Advancement Indicator Attribute, Tourism Participation Index, Infrastructure Development Indicator and Environment. These attributes are related to indicators of competitiveness unlike to other tourist villages. This finding is the basic information that the Indonesian government can use to formulate tourism sector development policies so as to achieve success in developing tourism villages.

Keywords: Competitiveness Monitor, Competitiveness, Tourist Village, Mapping

INTRODUCTION

The tourism sector is one of the factors driving a country's economic growth. The role of tourism industry occupies an important position in contributing to local revenue. According to data from the ILO in 2011, the tourism industry is able to create jobs and develop the economy significantly. One important fact is that many other related service benefits from the development of the tourism industry, i.e. local trade, transportation, accommodation and entertainment. Based on the report of the World Travel and Tourism Council (WTTC) in 2016, tourism contribution to world gross domestic product reached 10 percent, while revenue from international tourist visits is about seven percent of the world's exports of goods and services (Ministry of Tourism, 2017). In terms of creating jobs, one in 10 workforces is created by the tourism sector. Yanti and Hadya (2018) noted, that contributions from tourism caused an increase in revenue to the PAD (locally-generated revenue) in Padang.

Central Java is one of the provinces in Indonesia that has the potential to spread tourism to rural areas. Potential tourist villages are expected to have multiplayer effects on the villages and the community around the tourist attractions. The development of the villages around the tourist attractions has become a phenomenon which provided an opportunity to alleviate poverty in the villages.

The tourism sector has shown increasing growth. According to the World Tourism Organization (UNWTO) the number of international tourist visitors is expected to reach 1.8 billion in 2030 with an annual growth rate of 3.3 percent. With this, the emergence of a number of new tourist destinations with traditional concepts, will become very popular with tourists. This condition is both an opportunity and a challenge for Indonesia, in terms of the development of national tourism. The Ministry of Tourism noted that the number of foreign tourist arrivals in 2016 was 12 million and domestic tourists were approximately 263.68 million. Another important indicator in terms of tourism is the competitiveness aspect of tourism, where Indonesia's position has increased significantly from ranking 70 in the world to ranking 50 in 2015 based on the results of the WEF (World Economic Forum) assessment. Based on UNWTO data, the growth of Indonesian tourists in 2016 was 15.54%, which exceeded the world average of 3.9%. This gives the Tourism Ministry the confidence to increase the target of foreign tourist visits in 2017 from 12 million to 15 million with the main focus on Digital Tourism, Homestay Tourism Village and Air Connectivity (Ministry of Tourism, 2016).

For Central Java, the tourism industry is one of the most important service sectors to be developed. In 2011, this sector was able to contribute to Central Java's GRDP of 2.98% and this number tended to be stable in 2012 and 2013, which was 2.96%. In 2015, it increased to 3.09% (Badan Pusat Statistik, 2015). The number of foreign tourists visiting Central Java through the entrance of Adi Sumarmo and Ahmad Yani airports in February 2016 was 1,834 visits, up compared to January 2016 which recorded 1,545 visits, an increase of 18.71 percent. (Badan Pusat Statistik, 2015)

Semarang Regency is also getting more aggressive in developing tourism, which included tourist villages. Semarang is one of the areas, which is a golden triangle area, which is the center of economic growth, known as the Joglosemar area. This area is directly adjacent to the provincial capital of Central Java, the center of economic growth. This area has the potential to be developed into a tourist destination. The development of the tourism sector in Semarang district is expected to encourage the tourism industry in the surrounding areas. At present, Ahmad Yani airport in Semarang and Adi Sumarmo airport in Solo is becoming international airports with increasing capacity and flight routes. Land transportation is also more efficient with the construction of toll roads that connect Semarang with other regions. Progress in the field of infrastructure and other supporting facilities has led to economic growth in the central area and its surroundings.

The motivation of this research is to the analyse the determining competitiveness, which is very important to do to illustrate the position of competitiveness of tourism in the area of Ngrawan tourism village and to compare of the competitiveness of the area with the Kopeng tourism village area. Further, the purpose of this study is to measure the competitiveness of tourist villages in Semarang district. The results of this study are expected to be useful in providing an overview of the competitiveness position of Ngrawan village in the surrounding tourist villages. This information is important to use in establishing a tourism village development strategy by management. This research is part of a study of tourist villages in Semarang, Central Java that has been carried out by Koranti and Sriyanto (2017) i.e. Desa Menari.

LITERATURE REVIEW AND PREVIOUS RESEARCH STUDY

Tourism is one sector that is increasingly important in the economic development of the nations of the world. The benefits obtained include, among other things, the benefits of increasing income and creating jobs throughout the world. For Indonesia, tourism contributes 4% of GDP and 7.75% of employment (Kemenparekraf, 2011).

Tourist Competitiveness

Competitiveness is associated with the level of output produced for each input unit used (called productivity). Increased productivity is seen from the increase in capital and labor, the quality of inputs, and the technology applied. In the theory of competitiveness, the theory of comparative advantage and competitive advantage is known as a measure of competitiveness. The theory of comparative advantage refers to the superiority of each region or country. In the regional context, the comparative advantage of a commodity is a commodity that is relatively superior owned by other regions. In the regional context, the comparative advantage of a commodity is a commodity that is relatively superior to that owned by other regions. If an area knows a sector that has a comparative advantage, then the government as a policymaker can determine the direction of development of the sector to make it more profitable for the region by regulating competitiveness strategies. Competitive advantage is to be the one to have created it first to have it. The competitive advantage of a commodity is a processed product that is formed from its performance so that it can outperform other sector commodities.

Tourism has developed into a large industry and a mainstay in the world. This is indicated by the continued increase in income generated by the number of tourist visitors. According to Arianti (2016) tourism has the potential to create jobs, increase per capita income, increase foreign exchange and increase government revenues. Tourism affects the economy directly or indirectly. The results of the study revealed that in terms of demand structure in the economy, the role of the tourism sector (large & retail trade, hotels, restaurants, transportation and entertainment & recreation) was 40.86% if the business sector was grouped in the agriculture & mining sector, industrial sector, tourism sector and service sector.

Competitiveness is a complex concept and consists of several elements both observed and unobserved. This concept is difficult to measure. The study conducted by Kozak (1999) uses survey data to find out perceptions and opinions of tourists on regional or country visits to measure tourism competitiveness. Based on tourist opinions or perceptions, competitiveness indicators are made, namely beach quality, people's friendliness, shopping facilities and so on. These indicators are very subjective and are difficult to measure and are intrinsic.

The study by Dwyer (2000) measured the competitiveness of tourist destinations by comparing 19 destinations. The data used is publication data issued by each destination. Competitiveness Monitor (CM) analysis was introduced in 2001 as a measure of tourism competitiveness. CM was updated in 2002 as a result of the collaboration between WWTC and Christel De Haan Tourism and Travel Research Institute (TTRI), University of Nottingham. CM is also developed in different research areas such as the results of the World Bank Global Competitiveness report, the UK Regional Competitiveness Indicators and IMD World Competitiveness Yearbook. The CM analysis uses 8 (eight) indicators that are used to form competitiveness. These indicators are the Human Tourism Indicator, Price Competitiveness Indicator, Infrastructure Development Indicator, Environment indicators, Technology Advancement Indicators, Human Resources Indicators, Open Indicators, and Social Development Indicators. The study conducted by Trisnawati et al. (2008), uses these 8 indicators to compare destinations in Surakarta and Yogyakarta. Dwyer (2000) uses Price Competitiveness Indicator to measure the competitiveness of tourist destinations. This study distinguishes two categories of prices, namely travel costs and ground costs. Travel costs are related to the costs incurred from and to a destination and the ground costs associated with the cost of commodities in a destination. Another study was conducted by Mihalic (2000), which included Quality Environment as an indicator of determining tourism competitiveness. Ritchie and Crough (1999) extend previous research by basing on Comparative Advantage theory, which states that ownership and use of resources owned by a country (destination) will result in that the destination to be competitive compared to other destinations.

RESEARCH METHOD

Research Design

This research design is exploratory research which measures the competitiveness of the tourism industry in the tourist village of Ngrawan. The next step is to compare the competitiveness of the tourism industry in the study area with the Kopeng and Gemawan tourism villages as benchmarks. The analysis time period is from 2014 to 2016. The research object is the tourist village of Ngrawan with the tourist village of Kopeng and the village of Gemawan as a comparative analysis. The study uses secondary data obtained from the tourism agency, the regional statistics center, regional economy division and other related agencies. Primary data is needed if secondary data for measuring competitiveness indicators are not obtained. This data comes from hotels, restaurants and travel agencies as well as from tourists who come to the tourist village of Ngrawan. The data is needed to explore the factors that are the advantages or disadvantages of the tourism industry in the tourist village of Ngrawan.

Variables and Measurement

The variable used in this study is a tourism competitiveness index consisting of 8 indicators of tourism competitiveness. The calculation of the tourism competitiveness index in this study uses indicators from WWTC consisting of the Human Tourism Indicator, Price Competitiveness Indicator, Infrastructure Development Indicator, Environment indicators, Technology Advancement Indicators, Human Resources Indicators, Open Indicators, and Social Development Indicators. The explanation for the eight indicators is:

1. ***Human Tourism Indicator (HTI).*** This indicator shows the achievement of regional economic development due to the arrival of tourists in the area. The measurement used is the Tourism Impact Index (TII), which is the ratio between tourism receipts and GDP. Another measure is the Tourism Participation Index, which is the ratio of the activity of tourists (coming and going) to the population of the destination area.
2. ***Price Competitiveness Indicator (PCI).*** This indicator shows the price of commodities consumed by tourists during a tour such as accommodation, travel, vehicle rental and so on. The measurement used is Purchasing Power Parity (PPP), as a proxy of the price is the average minimum hotel tariff, which is a worldwide hotel. PPP is calculated from the number of tourists in area x the average hotel rate x and the average period of stay.
3. ***Infrastructure Development Indicator (IDI).*** The indicator shows the development of highways, improvement of sanitation facilities and increased population access to clean water facilities. To measure the IDI there are difficulties, so CM proxies the IDI with the income per capita of the population.
4. ***Environment Indicator (EI).*** This indicator shows the quality of the environment and awareness of the population in maintaining their environment. The measurements used are population density index (ratio between total population and area) and CO2 emission index. Data on CO2 emission index can be obtained from information on air pollution levels on major roads.
5. ***Technology Advancement Indicator (TAI).*** This indicator shows the development of modern infrastructure and technology as indicated by the widespread use of the internet, mobile telephone and the export of high-tech products. Measurements used are telephone index (ratio of telephone line usage to population) and export index (export ratio of high-tech products: computers, pharmaceutical products, industrial machinery and electronics with total export quantities)
6. ***Human Resources Indicator (HRI).*** This indicator shows the quality of human resources in the area so that it can provide better services to tourists. The measurement of HRI uses the education index which consists of the ratio of illiterate-free populations and the ratio of residents who have elementary, middle, high school, diploma and graduate education.
7. ***Openness Indicator (OI).*** This indicator shows the level of the openness demonstrated by destinations towards international trade and international tourists. The measurement uses the ratio of the number of receipts from international tourists to the total PAD and the ratio of export-import tax revenues to the total receipts.
8. ***Social Development Indicator (SDI).*** This indicator shows the comfort and safety of tourists to travel in the destination area. SDI size is the average length of stay of tourists in the destination area.

Data analysis

The stages of analysis carried out are:

1. Calculate the tourism index of the eight indicators that form the competitiveness index mentioned above with the formula:
   $X^c i = X^c i - \min (X^c i) \text{ Max } (X^c i) - \text{Min } (X^c i)$
2. Calculate the composite index of the eight indicators that determine tourism competitiveness
   $Y^c k = 1/n \sum X^c i$
3. Calculating the tourism competitiveness index
   $Z^c = \sum W k \, Y^c k$
4. Comparing the competitiveness of the tourism industry in the tourist village of Ngrawan with the tourist village of Kopeng and Gemawang, to find out what factors need to be developed.

RESULTS AND DISCUSSION

This study calculates the tourism competitiveness index by including all indicators of competitiveness from WWTC as many as 8 indicators and specializes in Ngrawan tourist village destinations. This study also compares the competitiveness of these destinations with the Gemawang tourism village and Kopeng tourist village, which is a benchmark for tourist village areas in Getasan district, Semarang Regency. This analysis focuses on determining competitiveness and is important to illustrate the position of competitiveness of Ngrawan tourism village and compares it with the competitiveness of Gemawang and Kopeng tourist villages. The results of the calculation of the tourism index in the tourist village of Ngrawan can be seen from Table 1 and Table 2.

Table 1. The calculation results of the tourism index from the indicators forming the competitiveness index

No	GEMAWANG	NGRAWAN	KOPENG
1	***Human Tourism Indicator* (HTI)**		
2014	1,301 (13%)	1,743 (17%)	7,103 (70%)
2015	1,465 (8%)	2,105 (12%)	14,086 (80%)
2016	1,602 (8%)	2,242 (12%)	15,578 (80%)
2	***Price Competitiveness Indicator* (PCI)**		
2014	31800000 (8%)	1550000 (1%)	342773640 (91%)
2015	38130000 (5%)	2067000 (3%)	740659500 (95%)
2016	46033680 (27%)	2368170 (14%)	103791870 (60%)
3	***Infrastructure Development Indicator* (IDI)**		
2014	0,235 (12%)	1,041 (54%)	0,666 (34%)
2015	0,102 (27%)	0,980 (29%)	0,666 (44%)
2016	1,176 (8%)	0,962 (80%)	0,676 (12%)
4	***Environment Indicator* (EI)**		
2014	5,133 (27%)	5,5113 (29%)	8,302 (44%)
2015	5,116 (7%)	54,807 (80%)	8,347 (12%)
2016	5,256 (8%)	55,267 (80%)	8,342 (12%)
5	***Technology Advancement Indicator* (TAI)**		
2014	0,343 (36%)	0,403 (43%)	0,199 (21%)
2015	0,347 (38%)	0,376 (41%)	0,199 (22%)
2016	0,364 (37%)	0,404 (41%)	0,217 (22%)
6	***Openess Indicator* (OI)**		
2014	7,361 (12 %)	2,507 (4 %)	52,635 (84 %)
2015	8,252 (8 %)	3,015 (3 %)	94,517 (89%)
2016	8,976 (8 %)	3,231 (3 %)	104,567 (90%)

7	***Social Development Indicator* (SDI)**		
2014	2,01 (33 %)	2,00 (32 %)	2,20 (35 %)
2015	2,11 (32%)	2,12 (33 %)	2,32 (35 %)
2016	2,21 (30 %)	2,50 (34%)	2,59 (35%)
8	***Human Resources Indicator* (HRI)**		
2014	0,068 (34 %)	0,060 (30 %)	0,070 (35 %)
2015	0,178 (31 %)	0,193 (33 %)	0,211 (36 %)
2016	0,085 (35 %)	0,072 (29 %)	0,088 (36 %)

Table 2. Tourism Competitiveness Index

Indicator	**Gemawang**	**Ngrawan**	**Kopeng**
Tourism Participation Index (TPI)	1,391	1,702	1,854
Purchasing Power Parity (PPP)	1,300	0,970	1,561
Infrastructure Development Indicator (IDI)	1,010	1,052	1,168
Environment Indicator (EI)	1,012	1,762	1,913
Technology Advancement Indicator (TAI)	1,090	0,934	2,056
Human Resources Indicator (HRI)	1,034	1,050	0,383
Openness Indicator (OI)	1,396	1,686	0,566
Social Development Indicator (SDI)	1,250	1,320	0,713

The results of the analysis of the tourism index calculation have implications for the policies that must be carried out by the Ngrawan tourism village government to develop the tourism sector, because by paying attention to these indicators of competitiveness, it can be examined the strengths and weaknesses of the region in developing the tourism industry as a source of PAD potential can be examined. Based on Tables 1 and 2 above, it can be stated that the tourism competitiveness index in the Kopeng tourism village is higher compared to the tourist village of Ngrawan and Gemawang. The explanation of each indicator that forms a competitiveness index in the tourism sector is as follows:

Human Tourism Indicator (HTI)

The Human Tourism Indicator shows the achievement of regional economic development as a result of the arrival of tourists in the area. The measurement used is the Tourism Partition Index, the ratio between the number of tourist activities that come and go with the population of the destination area. The results of the analysis show that the number of tourists both domestic and foreign tourists visits the tourist village of Kopeng. In 2014 to 2016 the Kopeng tourism village showed an increase in the HTI index, which is sequentially from 7,103, 14,086 and 15,578. Likewise for the Tourism Participation Index (TPI) in Kopeng, Ngrawan, and Gemawang is 1.854, 1,702, and 1,391 respectively. This figure shows that the number of tourist arrivals with Kopeng tourism is the highest, followed by Ngrawan village, then Gemawang village.

The presence of tourists brings a huge multiplying effect on society. This industry has stimulated the economic life of the Kopeng tourism village, both in terms of the home industry and service and goods companies. Efforts really had to be made by the Ngrawan tourism village government to increase the presence of both domestic and foreign tourists. Efforts that have been made by the local government to promote culture and culinary tourism, in the village of Ngrawan, are packaged attractively so that the village of Ngrawan is able to attract both domestic and foreign tourists.

Price Competitiveness Indicator (PCI)

PCI shows the price of commodities consumed by tourists during tours such as accommodation, travel, vehicle rental and so on. The measurement used is the Purchasing Power Parity (PPP) as a proxy of price. It is the average minimum of hotel tariff. The researcher used data from hotels around the tourist village. PPP is calculated from the number of tourists in area x the average hotel rate x the average period of stay. The rates for these hotels are relatively the same between hotels located around the tourist villages of Ngrawan, Gemawang and Kopeng.

The calculation results show that the highest PCI index is in the tourist village of Kopeng. The PCI index in Kopeng from 2014 to 2016 was 91%, 95% and 60% respectively. Likewise for the PPP index in Kopeng, Gemawang and Ngrawan, respectively are 1,561, 1,300 and 0,970 respectively. This is caused by the number of tourists who come to the tourist village of Kopeng more than to Ngrawan and Gemawang. Another factor that determines the PPP index is the average stay of tourists in the destination area. The average tourist stay in the tourist villages of Kopeng, Ngrawan and Gemawang, respectively is 1,561 days, 0.970 days, and 1,300 days respectively. The difference in average stay is largely determined by the convenience of tourists in the destination area and the tourist attraction offered by the destination. The village government needs to sell the attraction of the tourist village of Ngrawan attractions and the surrounding area. This area has a lot of tourism potential that needs to be developed and cultivated seriously so that the tourist village of Ngrawan, known as a cultural area, can develop its tourism potential as the tourist village of Kopeng.

The tourists stay is determined, among others, by the comfort of the hotel and the friendliness of the people in the destination area. In terms of service quality, hotels and homestays in the tourist villages of Ngrawan, Gemawang and Kopeng are not significantly different. These resources need to be managed properly, so that the comfort level of tourists in these destinations can be maintained. In addition, safety factors also need to be considered to protect tourists from acts of crime or other crime. By paying attention to these factors, tourists will feel safe and comfortable and will stay longer in the destination areas.

Infrastructure Development Indicator (IDI)

IDI shows the development of highways, improvement of sanitation facilities and increased population access to other facilities due to the trickledown effect of the arrival of domestic and foreign tourists. Their arrival is expected to provide welfare to the residents of the destination area. To measure this index uses the per capita income of the population. In 2014 to 2016, the value of the Infrastructure Development Indicator in Kopeng was 0.666, 0.666 and 0.676 respectively. The competitiveness index measured using the Infrastructure Development Indicator Index shows that Kopeng (1,168), Ngrawan (1,052), and Gemawang (1,010) respectively. Thus the development of highways, improvement of sanitation facilities and an increase in population access to other facilities in Kopeng tourism is the highest, while the tourist villages of Ngrawan and Gemawang villages show relatively comparable conditions.

Environment Indicator (EI)

Environment Indicator shows the quality of the environment and awareness of the population in maintaining their environment. Measurements used are population density index (ratio between population and area) and CO2 emission index. Data on CO2 emission index can be obtained from information on air pollution levels on major roads. This index implies that if a destination area has a very high population density, it is assumed that the quality of the environment in the destination area is low. Environmental quality will affect the comfort of tourists in these destinations. In general they want a clean, comfortable and safe destination and a refreshingly natural atmosphere. The level of population density in the three tourist village destinations is not significantly different. So the thing that needs to be done is the awareness of the population to keep the environment clean and beautiful. With a quality environment, tourists will be comfortable to carry out tourism activities in the area. The Environment Indicator Index obtained shows that Kopeng shows the highest yield, namely 1,913, followed by the village of Ngrawan (1,762), and the smallest is the village of Gemawang (1,012). Efforts must really be made by the tourism village government of Ngrawan to increase the presence of tourists, among others by increasing the quality of the environment and awareness of the population in maintaining their environment, especially with tourism. The efforts that have been made such as mutual cooperation between villagers to clean up will make tourists more comfortable in carrying out their tourism activities.

Technology Advancement Indicator (TAI)

This indicator shows the development of modern infrastructure and technology as indicated by the widespread use of the internet, mobile telephone and the export of high-tech products. Measurements used are telephone index (ratio of telephone line usage to population) and export index (export ratio of high-tech products: computers, pharmaceutical products, industrial machinery and electronics with total export quantities). The results of the analysis show that the technology index in the destination area of Kopeng tourism village is higher than the Ngrawan and Gemawang tourist village which is 2,056, 0,934, and 1,090 respectively. This index explains that tourist arrivals will increase the use of high-tech products in the destination area. It is assumed that tourists, especially from overseas, will bring technological changes to the destination area.

Human Resources Indicator (HRI)

This indicator shows the quality of human resources in the area so that it can provide better services to tourists. The measurement of HRI uses the education index, which consists of the ratio of illiterate-free populations and the ratio of residents who have elementary, middle, high school, diploma and graduate education. The highest value of Human Resources Indicators from 2014 to 2016 is Kopeng village, which is 0.07, 0.211 and 0.088 respectively.

The results of the analysis show that the index of Human Resources Indicator in the tourist village of Kopeng is higher than the destination of the Ngrawan and Gemawang tourism village which is 0.383, 1,050, and 1,034 respectively. Thus this index implies that the higher the level of education of the population in the destination area, the better are services provided to tourists in the destination area. They understand that when more tourists come and stay longer in the destination areas, it will be more beneficial to the destination area. One of the benefits obtained is regional income from the tourism sector. The high regional income is assumed to increase the welfare of the population in the destination area and its rate of economic development in the will also increase.

Openness Indicator (OI)

OI shows the level of openness of destinations towards international trade and international tourists. The measurement uses the ratio of the total revenue from international tourists to the total Regional Original Income. The highest Openness Indicator value from 2014 to 2016 is Kopeng, which is 52,635, 94,517 and 104,567 respectively. This indicator implies that with the arrival of foreign or international tourists leading to trade between the two countries namely the country of origin of tourists and the country of a tourist destination. It should be realized that the purpose of tourist arrivals to a destination area is on vacation, doing trade and other professional purposes such as seminars, education and health. With the diversity of tourists from various countries who come to the destination area, it is expected that local products can be marketed in the international market. The results of the analysis show that the index of Openness Indicator in the tourist village of Ngrawan is higher than the destination of Gemawang and Kopeng tourism villages, namely 1.686, 1.396, and 0.566. Ngrawan Village presents local cultural attractions that are proven to be in demand by foreign tourists, while the village of Gemawang is famous for its batik products.

Social Development Indicator (SDI)

SDI shows the comfort and safety levels of tourists to travel in the destination area. SDI is the average length of stay of tourists in the destination area. The highest value of the SDI from 2014 to 2016 is in Kopeng village, which is 2.2; 2.32 and 2.59. This index implies that the longer tourists stay in the destination area, the more money will be spent on shopping or another spending in the area. This condition will produce income in the destination area to increase. Based on the average SDI index, tourists staying in the tourist village of Ngrawan are higher than the Gemawang and Kopeng destinations, namely 1,320, 1,250, and 0.713. This implies that the contribution of the tourism sector to Regional Original Revenue in the tourist village of Ngrawan is higher than that in the Gemawang and Kopeng destinations. Based on these eight types of indices, it can be seen that the position of tourism competitiveness in the tourist village of Ngrawan is higher than the tourist village of Kopeng and Gemawang as a comparison. Based on the index value obtained from table 5.1, it can be explained that tourism competitiveness in the destination Ngrawan tourism village is lower than Kopeng tourism village. Kopeng tourism village which was used as the benchmark in this study, was the first tourist destination in Getasan district, Semarang Regency (Dinas Pariwisata, 2015). The results of this analysis have implications for the policies that must be carried out by the management of Ngrawan tourism village to develop the tourism sector by paying attention to those indicators. The most support should be given to Adi Sumarmo airport in Solo and Ahmad Yani in Semarang, as access to local and foreign tourists. This is important because considering the determinants of tourism competitiveness, we can examine the strengths and weaknesses of the region in developing the tourism industry. Based on the measurement of the competitiveness index of Ngrawan, Kopeng and Gemawang tourism villages, it can be described by the tourism map as shown in Figure 1 and Figure 2.

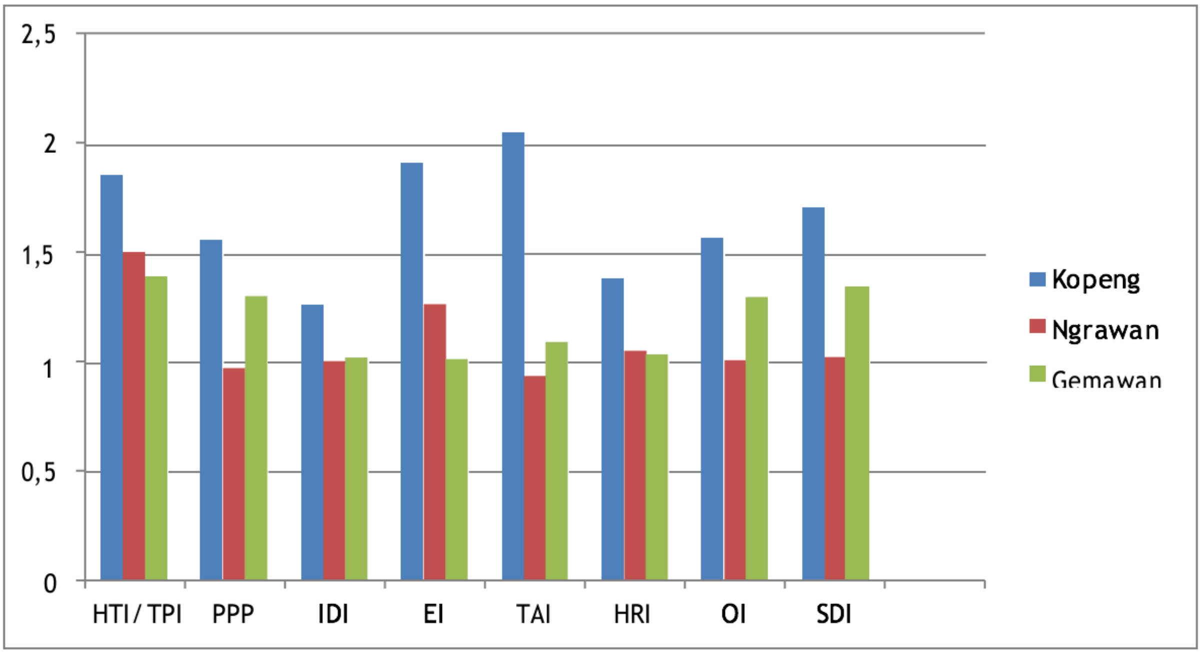


Figure 1. Mapping of Tourist Village Ngrawan, Kopeng dan Gemawang

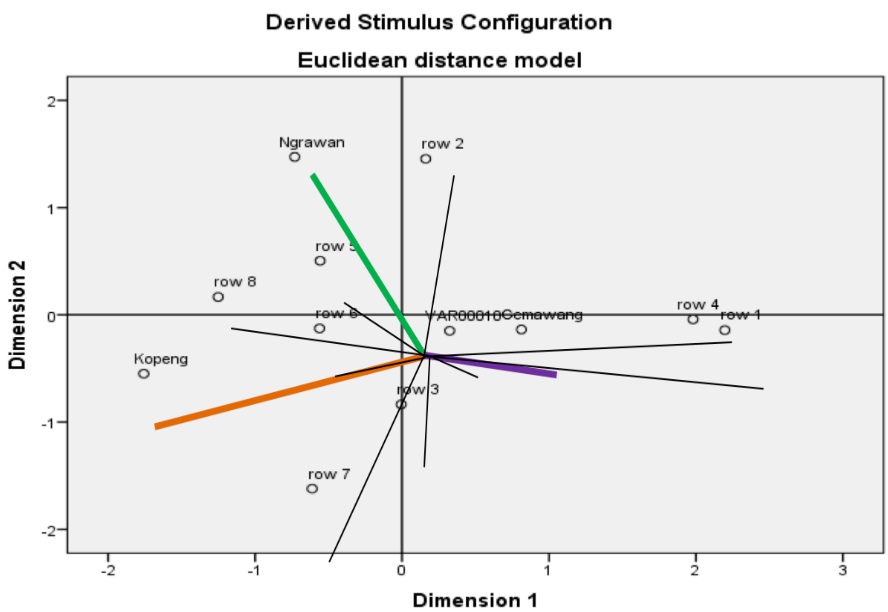


Figure 2. Mapping of Ngrawan, Kopeng and Gemawan tourist villages based on the Euclidean Distance

CONCLUSION

Based on the analysis that has been done, it can be concluded that the tourism competitiveness index in the tourist village of Kopeng is higher than that of the tourist village of Ngrawan and the village of Gemawang.

1. Human Tourism Indicator (HTI) is an indicator to measure the number of tourist arrivals, where the highest value is in the tourist village of Kopeng.
2. Price Competitiveness Indicator (PCI) as measured by the PPP index, shows that the tourist village of Kopeng has the highest value. Comparison of average tourist stays in Kopeng, Ngrawan and Gemawang is 1,561, 1,300, 0,970 days.
3. Infrastructure Development Indicator (IDI) shows per capita income, wherein the three destinations are not significantly different. The IDI index of Kopeng, Ngrawan, and Gemawang tourism villages in a row is 1.168, 1.052 and 1.010.
4. Environment Indicator (EI) shows the level of population density, where Kopeng tourism village is higher than Ngrawan and Gemawang, which is 1,913, 1,762, 1,012.
5. Technology Advancement Indicator (TAI) shows a technology index, where the value of the Kopeng tourism village is higher than that of Ngrawan and Gemawang, which is 2.056, 0.934, 1.090.
6. The Human Resources Indicator (HRI) shows the education index, where the tourist village of Kopeng is higher than Ngrawan and Gemawang, which is 0.383, 1,050, 1,034.
7. Openness Indicator (OI) shows the level of openness to international trade and tourists, where the tourist village of Ngrawan is higher than Gemawang and Kopeng which is 1,686, 1,396, 0,566.
8. The Social Development Indicator (SDI) shows the average length of stay of tourists, where tourists live in the tourist village of Ngrawan longer than Kopeng and Gemawan which is 1,320, 1,250, 0,713.

LIMITATION OF THE RESEARCH

This study focuses on mapping tourism competitiveness in the tourist village of Ngrawan by making comparisons with Kopeng and Gemawang tourist village destinations as benchmarks. The limitation of this study is that the data used in this study is over a period of three years. Therefore, to obtain a more accurate picture of competitiveness, it should collect data over a longer period of time. The expansion of the study area needs to be carried out so that a comprehensive comparison can be made.

The development of the tourism sector in the tourist village of Ngrawan requires more publicity, government support, infrastructure and tourism facilities to increase tourist visits. Between Ngrawan and Kopeng tourist villages, there are many similarities including culture, natural conditions, access and attractions, in order to achieve the same conditions as Kopeng. To accelerate the process of tourism development, of course it requires support from the community as well and the government should establish tourism development policies. The ease of licensing and adequate facilities are very important to attract investors to Ngrawan. As a result, in the future the tourist village of Ngrawan will have a higher chance to become like the tourist village of Kopeng.

References

Arianti, Desi. (2016). Pengaruh Sektor Pariwisata Terhadap Perekonomian dan Keruangan Kota Bukittinggi (Pendekatan Analisis Input dan Output). *Jurnal Pembangunan Wilayah dan Kota*. Vol.12(4): 347-360.

Berita Resmi Statistik, (2016). No. 23/04/33/Th. X, 01 April 2016. Perkembangan Pariwisata Jawa Tengah. Bulan Februari 2016. BPS Provinsi Jawa Tengah

Badan Pusat Statistik, (2015). Jawa Tengah dalam Angka tahun 2005. Badan Pusat Statistik.

Dwyer. (2000). The price of competitiveness of travel and tourism: A comparison of 19 destination. *Tourism Management* Vol. 21 (1) pp.1-22.

Kementerian Pariwisata. (2017). Deputi Bidang Pengembangan Kelembagaan Kepariwisataan Kementerian. Neraca Satelit Pariwisata Nasional, 2017.

Kementerian Pariwisata. (2016). Laporan Akuntabilitas Kinerja Kementerian Pariwisata Tahun 2016, Biro Perencanaan dan Keuangan Sekretariat Kementerian. *Laporan Kinerja Kementerian Pariwisata 2016*.

Kemparekraf. (2011). *Neraca Satelit Pariwisata Nasional*. Jakarta : Kementerian Pariwisata dan Ekonomi Kreatif.

Koranti, Komsi dan Sriyanto. (2017). Development Strategy of Tourism Object of Desa Menari in Semarang Regency. *Proceeding* of the 2nd International Conference on Accounting, Management, Economics and Social Sciences (ICAMESS 2017), Bandung

Kozak, M. and Rimmington, M. (1999). Measuring tourist destination competitiveness: conceptual considerations, and empirical findings. *International Journal of Hospitality Management*, Vol. 18 (3), pp 273-283.

Mihalic, Tanja (2000). Environmental management of tourist destinations, a factor of tourist competitiveness, Tourism Management Vol. 21 (1) pp 65-78.

Novi Yanti dan Rizka Hadya. (2018). Kontribusi sektor pariwisata terhadap peningkatan PAD kota Padang. *Jurnal Benefita*, Vol. 3 (3), pp 370-379.

Ritchie and Crough. (1999). Tourism, competitiveness, and social prosperity, *Journal of Business Research*, Vol. 44 (3) pp.137-152.

Trisnawati, R., Wiyadi, Edy Priyono, (2008). Analysis of the Competitiveness Tourism Industries Increasing the Local Economy (The comparative Study Analysis of the competitiveness tourism between Surakarta and Yogyakarta). Economic Journal of Emerging Market, Vol.3 (2).

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 345-355
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.91

Implications of Daily Market Statistics on Daily Stock Market Index: Empirical Evidence from Colombo Stock Exchange

Chandrasegaran Larojan[1], Aruppillai Thayaparan [2]

[1] Department of Finance and Accountancy, Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, Sri Lanka
[2] Department of Economics and Management, Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, Sri Lanka

Correspondence: Chandrasegaran Larojan, Department of Finance and Accountancy, Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, Sri Lanka. Tel:0094775528603. E-mail: larojanc@vau.jfn.ac.lk

Abstract
This study examined the implications of stock market statistics on share price index, using daily data for the period from 1/03/1994 to 9/28/2018 (5932 Observations) on the Colombo Stock Exchange (CSE). The main objectives of the study were to assess the significant relationship between stock market statistics and share price index and to investigate the co-integration between the variables. The study adopted the ex-post facto research design. Daily market capitalization, daily share traded, and daily turnover equity was used as the proxies for the stock market statistics. Daily All Share Price Index (ASPI) was used as the proxy for the stock price index. Augmented Dickey Fuller test was used to find out the stationery of the data series, and the results of the test showed that ASPI data and stock market statistics were stationary. The Granger Causality test was used to check any causal relationship between variables revealed that, there is a one-way causal relationship between variables. The result of the regression shown that daily market capitalization was found to be a significant positive relationship with ASPI, daily share traded equity was found to be an insignificant relationship with ASPI and daily turnover equity was found to be an insignificant relationship with ASPI. In line with the findings of this study, it recommends that the CSE should build policies and potential investors should make the strategies in terms of share trading volume to enhance the stock market liquidity.

Keywords: Colombo Stock Exchange (CSE), Daily All Share Price Index (ASPI), Daily market capitalization, Daily share traded equity, and Daily turnover equity

1. Introduction

1.1. Background of the Study

Impact of market statistics on stock price/ index/ return has been concerned by the research analysts and policymakers. Research analysts and policymakers used market capitalization, share traded equity, and turnover equity of a stock market in order to identify the liquidity position of a stock market. Market capitalization is a common index used to measure the size of the stock market. Share traded equity measures the organized trading of equities as a share of output. Turnover equity is used to a measure the value of securities transactions relative to the size of the securities market. Stock market liquidity is one of the imperative characteristics of financial market and noticeably significant for the current and potential investments.

Stock return is a reward an investor obtains for a stock holding in a particular period. The Colombo Stock Exchange (CSE) which operates the only share market in Sri Lanka is a company limited by guarantee, established under the Companies Act No. 17 of 1982 and is licensed by the Securities and Exchange Commission (SEC) of Sri Lanka. The share market was opened to the public in July 1984. In 1985, a formal stock exchange was established in Sri Lanka. It was formerly called the Colombo Securities Exchange Limited. It has been calling as the CSE since 1990. The main contribution of this study is in its examination of the implications of daily market statistics on the daily stock market index in the CSE.

1.2. Research Problem

After a keen literature on the market statistics or the stock market liquidity on the stock price or stock return of various countries' stock markets, the researcher identified that those studies had been revealed contradict findings in the area of stock market liquidity and stock price/ index/ return. Stock in trade in a stock market could be upraised by different ways under well-administered rules and regulations, which are carefully governed by market operators. (Ogwuru and John, 2018). As liquidity of a stock market increases, stock returns increase or decline. The literature has proposed market capitalization, share traded equity, and turnover equity are the main proxies used as stock market statistics. With this context in mind, this study seeks to investigate the implications of daily market statistics on the daily stock market index at the CSE. Following research questions needs to be answered.

Q1. What would be the impact of daily market capitalization on daily ASPI of the CSE?
Q2. What would be the impact of daily share traded on daily ASPI of the CSE?
Q3. What would be the impact of daily turnover equity on daily ASPI of the CSE?

1.3. Relevant Literature

This section gives the theoretical underpinnings and the empirical literature.

1.3.1. Theoretical underpinnings

The Efficient Market Hypothesis (EMH) theorizes that stocks are priced efficiently to reflect all the available information on the intrinsic value of the security as it has been supposed that an efficient market is one where all unexploited profit opportunities are eliminated by arbitrage (Ajayi, Mehdian & Perry, 2004 as cited in Gbalam, 2019). Testing the market efficiency is vital for the investors, stockbrokers, financial institutions, government, etc. for understanding how capital markets are efficiently functioning and ability to increase the liquidity (Gbalam, 2019).

1.3.2. Empirical Literature

Gbalam (2019) examined a study on measuring liquidity effects of stock market returns on one of the leading quoted participants in the banking sector –Zenith Bank PLC for the period from 2001 to 2017. The All Share Index used as a proxy for stock returns and the market capitalization ratio measured by the value of shares traded divided by market capitalization multiplied by 100. The result shows that the market capitalization value ratio has a positive and significant impact on All-Share Index. Ogwuru and John (2018) have done a study on measuring liquidity and stock returns of ten quoted companies in the Nigerian Stock Exchange. It was found that there was a significant relationship between their liquidity measured by market capitalization ratio and their respective stock market returns. In all the selected quoted companies, the level of their liquidity significantly impacts on the degree or volume of returns made from stocks of the Nigerian Stock Exchange.

Kahuthu (2017) explored a study on whether stock market liquidity has an effect on stock returns of 50 companies listed at the Nairobi Securities Exchange from 2012 to 2016. Considering the width and depth aspects of liquidity measured by bid-ask spread and turnover rate, the study shows that market depth was found to be insignificant to stock returns while market width was found significant. The study revealed that market participants perceived both market width and depth to be significant to stock returns but only to a moderate extent. Liquidity was found to be significant but not the main predictor of stock returns. John, Okanta, and Nkama (2017) explored a study on trading volume and market turnover in the Nigerian Stock Market and their implications to stock market returns. Findings of the study revealed that the value of the transaction ratio has a negative and significant impact on the stock return. Turnover equity has a positive and significant impact on the share price index. The study concluded by stating that the volume of trade had a negative but significant effect on stock returns and attributes it the possibility of investor misspecification about future earnings or illiquidity of low volume stocks. The turnover at the market had a positive and significant effect on the stock market returns attributable to possible anticipation of higher market illiquidity by investors and consistent with the positive cross-sectional relationship between stock return and illiquidity.

John, Ibekwe, Uloma, and Egbo (2017) investigated a study on measuring daily stock market returns using market capitalization ratio in Nigeria for the period of 14 years from 2nd January 2001 to 31st December 2015 adopting the ex-post facto research design. The main findings of their study revealed that market capitalization value ratio has a positive and significant effect on stock returns. John (2016) investigated a study on the effect of stock market liquidity on daily returns in the Nigerian Capital Market adopting the ex-post facto research design and data were obtained from daily reports of the Nigerian Stock Exchange from 2nd January 2001 to 31st December 2015. The results revealed that the market capitalization value ratio has a positive and significant effect on stock returns. The value of transaction ratio shows a negative and significant impact on the stock returns.

Wei (2014) investigated a study on stock market liquidity and stock returns of the London Stock Exchange employing different proxies of liquidity such as: trading Cost based illiquidity proxies (bid ask spread, effective spread and quoted spread), trading quantity-based proxies (dollar trading volume and turnover ratio), trading speed-based proxy (Liu's measure) and price impact-based proxies (Amihud's ratio and turnover ratio). Findings show that a negative relationship between illiquidity and asset pricing. As illiquidity increases, instead of rises in stock returns, post ranking returns decrease. Chrisostomos, Andros, and Alexandros (2010) proposed a new price impact ratio as an alternative to the widely used Amihud's (2002) Return-to-Volume ratio. This new measure, which is deemed Return-to-Turnover ratio, essentially modifies Return-to-Volume ratio by substituting trading volume in its denominator with the turnover ratio for each security using daily data from all stocks listed on the London Stock Exchange over the period from 1991 to 2008. They argued against the conventional wisdom that there is a simple direct link between trading costs and stock prices.

The above literature review shows that most studies focused on only the foreign stock markets and considered a few years' data set. According to the literature, it has been observed that almost all the studies employed the monthly or the annual data set of a stock market. The purpose of this research is to bridge the gap identified in the literature and assess the implications of daily statistics on daily ASPI of the CSE. This study would be capable of providing in-depth analysis considering the period of 24 years from 1/03/1994 to 9/28/2018 (5932 Observations).

1.4. Objectives of the Study

Based on the literature review and the research questions following objectives were formulated:

1. to assess the impact of daily market capitalization on daily ASPI of the CSE.
2. to assess the impact of daily share traded on daily ASPI of the CSE.
3. to assess the impact of daily turnover equity on daily ASPI of the CSE.

1.5. Hypotheses and Their Correspondence to Research Design

As a follow-up to the research questions and objectives of the study, the following series of hypotheses were formulated based on the literature review.

Hypothesis 1 (H1)

$H_0 1$: There is no significant impact of daily market capitalization on daily ASPI of the Colombo Stock Exchange.

$H_1 1$: There is a significant impact of daily market capitalization on daily ASPI of the Colombo Stock Exchange.

Hypothesis 2 (H2)
$H_0$2: There is no significant impact of daily share traded on daily ASPI of the Colombo Stock Exchange.
$H_1$2: There is a significant impact of daily share traded on daily ASPI of the Colombo Stock Exchange.

Hypothesis 3 (H3)
$H_0$3: There is no significant impact of daily turnover equity on daily ASPI of the Colombo Stock Exchange.
$H_1$3: There is a significant impact of daily turnover equity on daily ASPI of the Colombo Stock Exchange.

The remaining of this research paper is structured as follows: Section 2 describes Methods and/or techniques; section 3 shows the results; section 4 shows the discussions, and section 5 shows the conclusion.

2. Methods and/or techniques

This section covers the research approach, data collection, variables, conceptual framework, and operationalization of the variables, mode of data analysis, hypotheses of the study, and empirical model.

2.1. Research approach

This study adopts the ex-post facto research design since the study used previous information of the variables. In the context of social and educational research the phrase 'after the fact' or 'retrospectively' refers to those studies which investigate possible cause-and-effect relationships by observing an existing condition or state of affairs and searching back in time for plausible causal factors (John & Okanta, 2017).

2.2. Data Collection

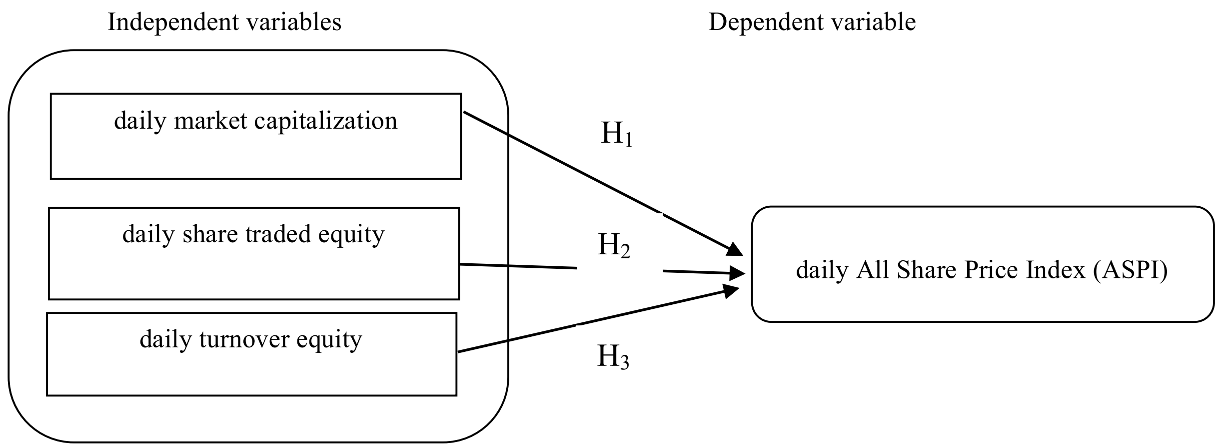
The data used for this research was generated from the CSE official CD (Microsoft Excel track sheets) from 1/03/1994 to 9/28/2018 (5932 Observations).

2.3. Variables

Daily market capitalization, daily share traded, and daily turnover equity was used as the proxies for the stock market statistics. Daily All Share Price Index (ASPI) was used as the proxy for the stock price index.

2.4. Conceptual framework

Figure-1 below shows the conceptual framework of this research study, which is based on the extant empirical literature review, depicts the relationship between independent variables and dependent variables.



Source: Researcher's own compilation based on Literature review.

Figure 1. conceptual framework

2.5. Operationalization of Study Variables

Table 1 illustrates the operationalization of the selected independent and dependent variables.

Table 1. Operationalization of Variables

Category	Variable	Proxies	Measurement	Hypothesized direction	Extant Studies
Independent variable	Daily Market Statistics	daily market capitalization	total rupee value of the market value of outstanding shares	Positive/ Negative	Gbalam (2019) Ogwuru and John (2018) John, Ibekwe, Uloma, and Egbo (2017) John (2016)
		daily share traded equity	total rupee value of the share traded equity	Positive/ Negative	John (2016) John, Okanta, and Nkama (2017)
		daily turnover equity	dividing the total number of shares traded by the average number of shares	Positive/ Negative	John, Okanta, and Nkama (2017)
Dependent variable	Daily Share Price Index	daily All Share Price Index (ASPI)	The index is calculated in real-time as a market capitalization weighted index, which constitutes all voting and non-voting ordinary shares listed on the CSE.	Positive/ Negative	Gbalam (2019) Ogwuru and John (2018) John, Ibekwe, Uloma, and Egbo (2017) John, Okanta, and Nkama (2017) John (2016)

Source: Researcher's own compilation based on Literature review.

2.6. Mode of data analysis

Augmented Dickey Fuller test was used to find out the stationery of the data series, and the results of the test showed that ASPI data and stock market statistics were stationary at first difference. The Granger Causality test was used to check any causal relationship between stock prices and stock market liquidity outcomes showed that, there is a one-way causal relationship between variables. To check the result of the Granger Causality test, a regression was run.

2.7. Empirical Model

$$\text{Log ASPI} = \beta_0 + \beta_1 \text{ Log MC} + \beta_2 \text{ Log STE} + \beta_3 \text{ Log TE} + \varepsilon$$

Where:

Log ASPI: Natural Log of daily All Share Price Index
Log MC: Natural Log of daily Market Capitalization
STE: Daily Share Traded Equity
TE: Daily Turnover Equity
ε: Error term

Results which are performed using E-Views are discussed in the next section.

3. Results

This section presents the diagnostic tests and correlation and multiple regression analysis.

3.1. Diagnostic Tests

This section presents the results of the following diagnostic tests: the unit root test, causality test, Heteroscedasticity test, Serial Correlation test, and Multicollinearity test.

3.2. Unit Root Test

The time series data was tested for the whether there was a presence of unit root to ensure that the parameters estimated are stationary. ADF was performed. To reject the null hypothesis that the data are non –stationary, the ADF statistics must be negative and less than the critical values and significant.

Table 2. Unit Root Test

No	Variables	Intercept				Constant and trend			
		ADF t-statistics	Prob.*	5% Critical Value	Order Of I	ADF t-statistics	Prob.*	5% Critical Value	Order Of I
1	LMC	-0.1530	0.9418	-2.8618	I(1)	-1.5710	0.8044	-3.4105	I(1)
2	D(LMC)	-72.2063	0.0001	-2.8618	I(0)	-72.201	0.0000	-3.4105	I(0)
3	LST	-4.3042	0.0004	-2.8618	I(10)	-8.3714	0.0000	-3.4105	I(9)
4	LTE	-4.4703	0.0002	-2.8618	I(10)	-7.8378	0.0000	-3.4105	I(9)
5	LASPI	-0.1594	0.9410	-2.8618	I(3)	-2.0359	0.5809	-3.4105	I(3)
6	D(LASPI)	-39.3844	0.0000	-2.8618	I(2)	-39.3896	0.0000	-3.4105	I(2)

*MacKinnon (1996) one-sided p-values.

The result of the unit root test is depicted in Table 2. As revealed, all variables employed in the study are stationary since the ADF Statistics is less than the critical values at 5% and significant.

3.3. Causality test

The granger causality test was conducted to test the causality of the impact of the independent variables on the dependent variable. Optimal lag selection criteria are given in Table 3.

Table 3. Optimal lag selection criteria

VAR Lag Order Selection Criteria
Endogenous variables: DLASPI DLMC LSTE LTE
Exogenous variables: C
Date: 04/27/19 Time: 10:00
Sample: 1/03/1994 9/28/2018
Included observations: 5920

Lag	LogL	LR	FPE	AIC	SC	HQ
0	23364.19	NA	4.39e-09	-7.891957	-7.887439	-7.890387
1	29286.86	11835.33	5.97e-10	-9.887452	-9.864864	-9.879603
2	29990.11	1404.361	4.73e-10	-10.11963	-10.07897	-10.10550
3	30297.02	612.4725	4.29e-10	-10.21791	-10.15918	-10.19750
4	30464.38	333.7562	4.08e-10	-10.26905	-10.19225	-10.24236
5	30569.07	208.6442	3.96e-10	-10.29901	-10.20414	-10.26604
6	30648.00	157.1986	3.87e-10	-10.32027	**-10.20733***	-10.28102
7	30690.99	85.55730	3.84e-10	-10.32939	-10.19838	-10.28386
8	30724.10	65.84019	3.82e-10	-10.33517	-10.18609	-10.28336
9	30769.08	89.40398	3.78e-10	-10.34496	-10.17781	-10.28687
10	30809.79	80.84715	3.75e-10	-10.35331	-10.16808	-10.28894*
11	30834.14	48.33299*	3.74e-10*	**-10.35613***	-10.15283	-10.28548
12	30841.45	14.50948	3.75e-10	-10.35319	-10.13183	-10.27627

* indicates lag order selected by the criterion.
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

As revealed in Table 3, Using various lag-order selection criteria, the results in Table-02 demonstrates that the optimal lags for variables in the specified error correction model are lag 6 and 11.

Table 4. Granger Causality Test at Lag Order 6

Pairwise Granger Causality Tests
Date: 04/27/19 Time: 10:02
Sample: 1/03/1994 9/28/2018
Lags: 6

Null Hypothesis:	Obs	F-Statistic	Prob.
DLMC does not Granger Cause DLASPI	5926	1.24187	0.2813
DLASPI does Granger Cause DLMC		110.561	1E-132
LSTE does not Granger Cause DLASPI	5926	2.67380	0.0136
DLASPI does Granger Cause LSTE		5.76888	5.E-06
LTE does not Granger Cause DLASPI	5926	3.22003	0.0037
DLASPI does Granger Cause LTE		9.22391	4.E-10
LSTE does not Granger Cause DLMC	5926	3.53078	0.0017
DLMC does Granger Cause LSTE		3.59019	0.0015
LTE does not Granger Cause DLMC	5926	3.32478	0.0029
DLMC does Granger Cause LTE		6.14913	2.E-06
LTE does not Granger Cause LSTE	5927	4.98306	4.E-05
LSTE does Granger Cause LTE		10.3934	2.E-11

The granger causality test was conducted to test the causality of the impact of the independent variable on the dependent variable. As indicated in the Table-04, it was revealed that DLMC does not granger cause ASPI (p – value 0.2813 > 0.05) however, ASPI of the CSE granger cause DLMC (p-value = 0.000 < 0.05). Hence, there is a unidirectional relationship between DLMC and ASPI. LSTE does granger cause ASPI (p – value 0.0136 < 0.05), ASPI of the CSE granger cause LSTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LSTE and ASPI. LTE does granger cause ASPI (p – value 0.0037 < 0.05), ASPI of the CSE granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and ASPI.

The granger causality test was conducted to also test the causality of the impact among the independent variables. It was revealed that LSTE does granger cause DLMC (p – value 0.0017 > 0.05), DLMC granger cause LSTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LSTE and DLMC. LTE does granger cause DLMC (p – value 0.0029 < 0.05), DLMC granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and DLMC. LTE does granger cause LSTE (p – value 0.0000 < 0.05), LSTE granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and ASPI.

Table 5. Granger Causality Test at Lag Order 11

Pairwise Granger Causality Tests
Date: 04/27/19 Time: 10:04
Sample: 1/03/1994 9/28/2018
Lags: 11

Null Hypothesis:	Obs	F-Statistic	Prob.
DLMC does not Granger Cause DLASPI	5921	0.78308	0.6575
DLASPI does Granger Cause DLMC		60.3897	5E-128
LSTE does not Granger Cause DLASPI	5921	2.49939	0.0039
DLASPI does Granger Cause LSTE		5.08894	6.E-08
LTE does not Granger Cause DLASPI	5921	2.45587	0.0046

DLASPI does Granger Cause LTE		7.86926	1.E-13
LSTE does not Granger Cause DLMC	5921	2.54917	0.0032
DLMC does Granger Cause LSTE		3.99644	8.E-06
LTE does not Granger Cause DLMC	5921	2.66354	0.0021
DLMC does Granger Cause LTE		6.62113	4.E-11
LTE does not Granger Cause LSTE	5922	2.34088	0.0072
LSTE does Granger Cause LTE		4.75299	3.E-07

As indicated in the Table 5, it was revealed that DLMC does not granger cause ASPI (p – value 0.6575 > 0.05) however, ASPI of the CSE granger cause DLMC (p-value = 0.000 < 0.05). Hence, there is a unidirectional relationship between DLMC and ASPI. LSTE does granger cause ASPI (p – value 0.0039 < 0.05), ASPI of the CSE granger cause LSTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LSTE and ASPI. LTE does granger cause ASPI (p – value 0.0046 < 0.05), ASPI of the CSE granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and ASPI.

It was also revealed that LSTE does granger cause DLMC (p – value 0.0032 > 0.05), DLMC granger cause LSTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LSTE and DLMC. LTE does granger cause DLMC (p – value 0.0021 < 0.05), DLMC granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and DLMC. LTE does granger cause LSTE (p – value 0.0072 < 0.05), LSTE granger cause LTE (p-value = 0.000 < 0.05). Hence, there is not a unidirectional relationship between LTE and ASPI.

3.4. Heteroskedasticity Test

In this study, the researcher used the Breusch-Pagan-Godfrey test and White test to detect whether there was a problem of heteroscedasticity.

Table 6. Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey Null hypothesis: Homoskedasticity			
F-statistic	7.143134	Prob. F(3,5928)	0.0001
Obs*R-squared	21.36662	Prob. Chi-Square(3)	0.0001
Scaled explained SS	8232.472	Prob. Chi-Square(3)	0.0000

According to Table 6, the results indicate that both the F test and the LM (obs*Rsquared of the auxiliary regression) conclude for the rejection of the null of homoskedasticity.

3.5. Serial Correlation Test

In this study, the researcher used the Breusch-Godfrey Serial Correlation LM test to detect whether there was a problem of serial correlation.

Table 7. Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test: Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	110.6896	Prob. F(2,5926)	0.0000
Obs*R-squared	213.6229	Prob. Chi-Square(2)	0.0000

According to Table 7, the Breusch-Godfrey test results indicate that the Null is of the absence of autocorrelation. The Durbin Watson statistic, as shown in the Table-10, indicate that there is no trace of autocorrelation.

3.6. Multicollinearity test

If the Variance Inflation Factor (VIF) exceeds 10, there will be a problem of multicollinearity. Coefficients of correlation (r) between independent variables should not be considered harmful until they exceed 0.80 or 0.90. If the r values among independent variables are more than 0.8, the problem of multicollinearity will occur. This problem may lead to strange results in regression analysis, for instance, the adjusted coefficient of determination (R^2) becomes too high and not statistically significant.

Table 8. Multicollinearity test

Variable	VIF
DLMC	1.011747
LSTE	7.675588
LTE	7.696615

According to Table 8, VIF of variables is less than 10, which indicates there was no such problem. According to the Table-09, all the correlations among independent variables are lower than 0.80, indicating that no multicollinearity exists between the variables.

3.7. Correlation analysis

Correlation analysis shows whether and how strongly pairs of dependent and independent variables are related.

Table 8. Correlation analysis

	DLASPI	DLMC	LSTE	LTE
DLASPI	1			
DLMC	0.8376	1		
LSTE	0.1015	0.0926	1	
LTE	0.1135	0.1062	0.9325	1

According to Table 9, there was a strong positive correlation between DLMC and ASPI of the CSE. There was a weak positive correlation between LSTE and ASPI of the CSE. There was also a weak positive correlation between LTE and ASPI of the CSE.

3.8. Multiple Linear Regression

The significance of the regression model is compared at an error level of 5%, and it proved that the model is significant.

Table 9. Multiple Linear Regression

Dependent Variable: DLASPI
Method: Least Squares
Date: 04/27/19 Time: 09:57
Sample (adjusted): 1/04/1994 9/28/2016
Included observations: 5932 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000788	0.000469	-1.681030	0.0928
DLMC	0.693375	0.005920	117.1273	0.0000***
LSTE	5.25E-05	0.000129	0.407511	0.6836
LTE	0.000115	0.000131	0.883513	0.3770
R-squared	0.702207	Mean dependent var		0.000300
Adjusted R-squared	0.702056	S.D. dependent var		0.010518
S.E. of regression	0.005741	Akaike info criterion		-7.481573
Sum squared resid	0.195405	Schwarz criterion		-7.477063
Log likelihood	22194.35	Hannan-Quinn criter.		-7.480006
F-statistic	4659.471	Durbin-Watson stat		2.359664
Prob(F-statistic)	0.000000			

According to Table 10, it indicated that the model used by the F-Statistics was well fitted (F = 4659.471). R^2 which shows the goodness of fit of the model indicates that 70.22% of the variations observed in the dependent variable for the three hypotheses were explained by the independent variables and the 29.78% is caused by other factors which cannot be observed. The difference between R^2 and adjusted R^2 interprets that the model independent variables have been selected correctly.

4. Discussions

The result of hypothesis one shows that DLMC has a positive and significant impact on the daily ASPI (coefficient = p = 0.0000 < 0.05, t-value = 117.1273). Therefore, there is a significant impact of daily market capitalization on daily ASPI of the CSE. The alternative hypothesis of $H_1 1$ is accepted. The findings are in line with the studies of Gbalam, 2019, Ogwuru and John, 2018, John, Ibekwe, Uloma and Egbo, 2017, and John, 2016. The result of hypothesis two shows that LSTE has an insignificant impact on the daily ASPI (coefficient = p = 0.6836 > 0.05, t-value = 0.4075). Therefore, there is no significant impact of daily share traded equity on daily ASPI of the CSE. Null hypothesis of $H_0 2$ is not rejected. The findings are contradictory with the study of John, 2016 and John, Okanta, and Nkama (2017), which found the value of transaction ratio shows a negative and significant impact on the stock returns. The result of hypothesis three shows that LTE has an insignificant impact on the daily ASPI (coefficient = p = 0.3770 > 0.05, t-value = 0.883513). Therefore, there is no significant impact of daily turnover equity on daily ASPI of the CSE. Null hypothesis of $H_0 3$ is not rejected. The findings are contradictory with the study of John, Okanta, and Nkama (2017), which found turnover equity has a positive and significant impact on the share price index.

Figures of Akaike/Schwartz/Hannan-Quinn info criterion indicate that it is the best model to adopt.
Empirical Model can be expressed as follows:
Log ASPI = -0.000788 + 0.693375 Log MC + 5.25E-05 Log STE + 0.000115 Log TE + ε

The next section gives a conclusion to the study.

5. Conclusions

This study examined the implications of stock market statistics on share price index, using daily data for the period from 1/03/1994 to 9/28/2018 (5932 Observations) on the CSE. The Granger Causality test was used to check any causal relationship between variables revealed that, there is a one-way causal relationship between variables. The result of the regression shown that daily market capitalization was found to be a significant positive relationship with ASPI, daily share traded was found to be an insignificant relationship with ASPI, and daily turnover equity was found to be an insignificant relationship with ASPI. The study recommends that the CSE should build policies, and potential investors should make the strategies in terms of share trading volume to enhance the stock market liquidity.

References

Chrisostomos, F., Andros, G., and Alexandros, K. (2010). 'Trading frequency and asset pricing on the London Stock Exchange: evidence from a new price impact ratio'

Gbalam, P. E., (2019). 'Measurement of Liquidity Effects on Stock Market Returns Using Market Capitalization Ratio – A Study of Zenith Bank Nigeria Plc' *International Journal of Economics and Financial Management*, *4* (1), 1-17.

John, O. O. (2016). 'The Effect of Stock Market Liquidity on Daily Returns in the Nigerian Capital Market', International Journal of Banking and Finance Research, *2* (1), 54-72.

John, O. O., Ibekwe, F. C., Uloma, A. O. and Egbo, B. O. (2017). Measuring Daily Stock Market Returns Using Market Capitalization Ration in Nigeria: *Journal of Management and Social Sciences*, *4*, (2), 188-203.

John, O. O. and Okanta, S. U. and Nkama, N. O. (2017). 'Trading Volume and Market Turnover in the Nigerian Capital Market: Implications to Stock Market Returns', *International Journal of Economics and Business Management, 3*, (1), 91-107.

Kahuthu, L. W. (2017). *The Effect of stock market liquidity on stock returns of companies listed on Nairobi Securities Exchange* (Masters' Thesis). Strathmore University. Retrieved February 15, 2019 from http://suplus.strathmore.edu/handle/11071/5594.

Ogwuru, H. O. R and John O, O. (2018). Measuring Liquidity Using Daily Stock Market Returns: A study of ten quoted companies in different sectors in Nigeria, *Journal for Uniport BFDEPT*, pp. 1-16. Retrieved March 24, 2019 from https://www.researchgate.net/publication/324829393.

Wei, W. (2014). Stock Market Liquidity and Stock Returns: Evidence from the London Stock Exchange, University of Liverpool, Retrieved February 07, 2019 from https://livrepository.liverpool.ac.uk/17473/1/WangWei_Mar2014_19473.pdf.

Asian Institute of Research
Connecting Scholars Worldwide

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 356-362
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.92

Impacts of Founder on The Success of Crowdfunding in Vietnam

Dr. Do Hoai Linh[1]

[1] School of Banking and Finance, National Economics University, 207 Giai Phong Road, Hai Ba Trung District, Hanoi Capital, Vietnam

Abstract
Being one of FinTech's most innovative operating tools in the age of 4.0, crowdfunding is one of the ways that is used to raise money without financial intermediations. This method helps companies and individuals worldwide raise millions of dollars from members of the public with low capital-cost, however, factors impacted on the success or failure of new kind of funds mobilizing method still be a controversial topic. Accordingly, the author aims at clarifying the influence of founders on the success of crowdfunding in Vietnam by primary data collected from questionnaire survey with Logistic Regression Model and Multiple Linear Regression Model. Based on the results, recommendations were proposed for founders to develop the modern kind of financial tools.

Keywords: Crowdfunding, Project information, Founder's social network, Founder's Funding Goal, Vietnam

1. Introduction

People are willing to give away money to create earnings or to find something that they can receive in return, therefore, community capital mobilization or crowdfunding comes from such a connection idea (Bouncken and Kraus, 2015; Alegre and Moleskis, 2016; Moritz and Block, 2015; Short et al., 2017). The crowdfunding itself is not a completely new concept; in early 1885, the base of the Statue of Liberty in New York was built as a result of a large number of small donations taken from hundreds of local residents (BBC Online, 2013). In Europe, in 1783 Mozart called for support to be able to hold 3 concerts in Vienna. Within a decade, crowdfunding has gained traction in a number of developed economies, including the United States; the United Kingdom; Australia; the Netherlands, Italy... This exciting phenomenon is spreading across the developed world and is now attracting considerable interest in the developing world as well. In fact, in recent years, crowdfunding is based on a well-developed internet platform, including names like Kickstarter, Indiegogo, GoFundMe or Circle Up can be seen as trading markets where people advertise their projects, place mobilized number and expect people everywhere to transfer money to finance their projects. Kickstarter, for example, the market leader in pledge or donation-based crowdfunding, has channeled over US$815 million from 4.9 million backers, 29 percent of which have invested in more than one project, to nearly 50,000 projects throughout the world since 2009. In the face of such development of markets and countries, almost people in emerging countries such as Vietnam had little concept about crowdfunding. Hence, the author aims at identifying which founder's factors affecting the success of a crowdfunding projects in transitional countries such as Vietnam. From findings, recommendations were proposed to promote the positive factors and limiting the negative factors in order to improve the success ability of crowdfunding projects in Vietnam.

2. Literature review

The beginning of the crowdfunding project started by raising funds to provide loans to low-income families in rural areas in Ireland. These households did not have credit experience as well as asset mortgages but are believed to be credible. Until 1800, there were more than 300 programs nationwide funded the project, with the highest percentage of households using this source of funding. After that, there was a series of projects calling for capital in the form of crowdfunding such as the Statue of Liberty in 1885, and Joseph Pulitzer has called on US citizens to donate money to build the statue of Liberty in the New York World newspaper. More than 125,000 participants contributed more than $ 100,000 within six months. Start-up and small businesses have practical money-making projects, that may help to make a better community, often be a shortage of funds to conduct these ideas. Consequently, the traditional solution is to get loans from banks, however, with careful appetite, banks always consider these start-up ventures too risky, especially in the time of economic downturn and restrictive lending policies. In addition, new ventures or start-up companies are lack of valuable collaterals. Then, the answer for these funding requests is absolute "No," and hardly these kinds of businesses can develop. Crowdfunding refers to the call for capital through online platforms on the Internet, by which fund can be raised directly between entrepreneurs and funders without any intermediations. Crowdfunding is using the crowd to raise capital by connecting people with talent ideas and some neat stuff to sell with those that have the funds to invest then it can create more jobs, new business opportunities, and consequently fuel the economy. Crowdfunding provides start-ups, entrepreneurs who have beneficial ideas with a promising alternative financing opportunity can access hundreds of potential contributors through crowdfunding websites. Crowdfunding can be found in four main types: i) Donation**,** people can donate money in small increments to a project which they believe have moral and ethical values for community; ii) Pre-order method, people, make online pledges during a campaign or pre-buy the product for later delivery with a good example is Kickstarter; iii) Reward- based method, investors get the satisfaction of helping and immediately receive a pre-determined reward or item of value, but no equity or ownership (Indiegogo); iv) Equity-based method, the newest model which will allow large numbers of regular people to invest small amounts to fund early startups with the expectation to receive dividends or investment appreciation based on profits of the business. Typically, crowdfunding is applied to startup projects, so it is not patented or branded. When you publicize a project and call for crowdfunding, your idea or creation is easy to copy. And because it has to expose to public opinion, it is on the bank of stealing the ideas by an opponent company. Crowdfunding can mean different things to different people. Each person has a different reason when choosing to invest in a project. The main target is to gain some tangible rewards as a return. They also invest to gain social recognition because they have invested in moral and society- beneficial projects. Another explanation can be they want to engage in something magnificent, to be a part of a big operation. They believed in the project can bring up their own desires, the truth value of a project can make their wishes come true.

Often investors need to evaluate the project in a detailed and rigorous manner before making an investment decision. But most investors do not do so. Partially, because the investors are ordinary people, they are not experts in the field and may not know the process to invest in the project. Investments are usually small, so many investors do not pay attention to in-depth research. Common business start-up projects by companies, small organizations, or individuals, so business plans and audited accounts may not be available for investors to research. Good idea but the project owner lack knowledge, expertise. Many homeowners are calling for crowdfunding with great creative ideas. But they do not have business expertise, no management knowledge or solving legal issues for the business. And they do not have experts to support or guide. And this can lead to catastrophe then investors lose their money but also their effort for such projects. According to a study, three out of four startups failed, or 75 percent of startup projects. This is very risky if investors do not study carefully before spending money. Few mechanisms for tracking, regulating the founders. It is difficult for donors to keep track of their money being used properly. And they did not receive promised rewards if the project failed. For international funding, if the reward is a source of income or material wealth, the tax under international law will still be taxable.

3. Methodology

3.1 Variables

Dependent variable: is the success or fail of a crowdfunding project in Vietnam. It means that one project succeeds when founder's goal is reached because there are two popular types of crowdfunding such as only get money from backers if project's goal is done or another type is that can get money if the goal is done or not. Therefore, the value is 0 if a campaign is failed or 1 if a campaign is succeeded.

Independent variables: eight independent variables have impacts on the success of crowdfunding project in Vietnam, included: i) Project information: all the information about the project such as main products, content, method raised, the function of the product, description, etc. The information illustrates what is the products? What is the potential of this project? And then attract more crowd funders => increasing the percentage of success; ii) Founders information: about the personal information of founders like name, education, experiences, etc. This information is more detail more chance to meet backers. Wheat et al. (2013) suggested that project founder information uploaded on CF campaign profile can establish the connection between the founder and the funders, helps people to understand the story of each project, the original idea as well as the mission they want to accomplish; iii) Founders financial capability: of course, this variable is very important and have a big impact on the meeting its goal. It refers to the solvency and liquidity of founders, let's investors know exactly the role of founders, if the campaign is failed, founders will continue or not; iv) Characteristics: It is a distinguishing feature or attribute of an item, person, phenomenon. If founders have good characteristics, maybe they will have good vision and easy to make sympathy with other people and then build the trust and lead to success. In other words, characteristics have a positive effect on the success of crowdfunding; v) Founders social network: Crowdfunding is a raise money method by small investors through using the Internet. If the number of social network friends of founders is high, it will an advantage help founders easy to meet its goal; vi) Standing or reputation: Crowdfunding is using via a connecting network, people do not meet directly or face-to-face, so that, the trust with founders and investors is very important. Because it is the first time they meet or not, if they have a strong reputation, it will lead to easy to reach the goal; vii) Funding goal: it is the amount of money that founder want to get when they open their position in the platform. In other words, the goal is high will promote founder to improve their project and bring a good thing to customers, but it is difficult to do. There are 2 main ways when raising money by using a platform such as can get money with any situations and only get money if the goal is done. So, if the funding goal is too high maybe can get nothing but until pay the expenses; viii) Nationality: It is slightly important. If founders come to developed countries, it will take a little bit easy to make trust with an investor, than the people come from poor or developing countries. Next reason is that crowdfunding in developed countries is very dynamic and have the long past, so, founders have more experiences than others.

Table 1: Variables and influence hypotheses

No	Factor	Variable	Influence
1	Project information	Project info	Positive
2	Founders information	Founders info	Positive
3	Founders financial capability	Founders finance	Positive
4	Characteristics	Characteristics	Positive
5	Founders social network: Facebook friends, Twitter friends	Network	Positive
6	Standing	Standing	Positive
7	Funding goal	Goal	Negative
8	Nationality	Nationality	Positive

Source: Summarized by the author

3.2 Source of data

As a preliminary empirical study, the goal of this paper is to develop initial proof concerning the character of crowdfunding and especially the founder's role in the success of a crowdfunding project in Vietnam. Therefore, primary data by using questionnaires list or survey and get more information from some famous crowdfunding websites in Vietnam such as https://comicola.com/, https://betado.com/. 200 questionnaires were disbursed, but 110 responded of 40 projects collected had 25% of the success, and around 75% was failed. All projects used the reward-based model, because, although crowdfunding is growing exponentially around the world, in Vietnam, this method is new, and people applied for the simplest way, which is a reward-based model. Besides, Logistic Regression Model and also used the Multiple Linear Regression Model to test the influence of independent variables on the proportion of reach the founder's goal.

Table 2: Correlations

	Success	Project info	Founders info	Founders finance	Characteristics	Network	Standing	Goal	Nationality
Success	1								
Project info	0.24	1							
Founders info	0.17	0.23	1						
Founders finance	0.05	0.07	0.01	1					
Characteristics	0.09	0.09	0.02	0.13	1				
Network	0.32	0.11	0.02	0.07	0.11	1			
Standing	0.04	0.18	0.03	0.05	0.28	0.19	1		
Goal	-0.12	0.25	0.16	0.15	0.10	0.22	0.34	1	
Nationality	0.01	0.03	0.01	0.02	0.01	0.08	0.13	0.29	1

Source: Summarized by the author

Notes: This table shows the correlation for the variables, significance at the 5% level.

Table 3: Statistics Descriptive

Variables	Number of observation	Mean	Min	Max
Project info	150	4.34	2	5
Founders info	150	3.14	1	5
Founders finance	150	0.05	0	5
Characteristics	150	2.56	1	4
Network	150	120.45	0	3,000
Standing	150	3.21	0	5
Goal	150	110,235,467	12,000,346	734,089,000
Nationality	150	0.23	0	5

Source: Regression results by the author

4. Discussion

Table 4: Logistics Regression Results

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Project info	0.334	0.073	12.247	1	0.000	1.543
Founders info	0.122	0.066	11.876	1	0.000	1.003
Founders finance	0.056	0.012	11.022	1	0.061	1.234
Characteristics	0.019	0.004	10.896	1	0.050	1.227
Network	0.203	0.053	11.928	1	0.000	1.008
Standing	0.089	0.004	11.003	1	0.051	1.563

Ln (Goal)	-0.329	0.021	12.005	1	0.001	0.345
Nationality	0.056	0.041	10.567	1	0.067	1.112
Constant	-1.321	2.321	8.993	1	0.003	1.002

Source: Logistic Regression results by the author

In this Regression, Odd as dependent variables. After testing hypotheses and measuring 8 factors, some factors have Sig. >0.05, it means that maybe those do not directly influence the percentage of the success of a crowdfunding project. Therefore, we chose 4 factors with lower Sig. than 0.05: project information (quantity and quality of information), founder's information, network (the number of founder's social network friends), and goal (funding goal or the amount of money that founder wants to raise through using crowdfunding platforms) have a dramatical influence on the success of a crowdfunding campaign.

Here is the equation of dependent and independent variables which have a powerful impact on the success of a project.

Ln (Odds) = -1.321+0.334***Project info**+0.122***Founders info**+0.203***Network-**0.329***Ln (Goal)**+u_e

On the table Regression results or equation above, project information, founder's information, and founder social network have a positive impact on the success, and it means that when one of three or all three variables increase or decrease the lead to a rise or decline the value of the dependent variable. In contrast, the funding goal factor has a negative influence on the success or if the figure for money on the funding goal increase, it will be led to a decrease of the success or reduce the ability for success.

Table 5: Multiple Linear Regression Model Results

Variables	Regression coefficient	T	P-value
Intercept	4.356	12.476	0.000
Project info	1.112	6.231	0.000
Founders info	0.785	5.502	0.002
Founders finance	0.341	2.342	0.054
Characteristics	0.121	1.108	0.052
Network	1.329	5.478	0.000
Standing	0.008	3.412	0.026
Ln (Goal)	-4.327	4.237	0.000
Nationality	0.037	-1.004	0.061

Source: Multiple Linear Regression results by the author

The result of this regression shows the proportion of attaining the funder's goal. Following the table above we can conclude that similarly with the Logistic Regression Model result, five factors have an impact on the accomplish of goal (because all those factors have P-value is lower than 5%). It is project information, founder's information, founder's social networks, reputation or standing, and funding goal.

$\hat{y}$ = 4.356+1.112***Project info**+0.785***Founders info** +1.329***Network**+0.008* **Standing**-4.327***Ln (Goal)**

In Multiple Linear Regression Result, factors have both negative and positive effect, such as only funding goal has a negative influence. In other words, when funding goal increase or decrease, it will lead to reduce or grow the percentage of achieving the goal.

Following all the results from the Regression, five main founder's factors that have significant influences on the proportion of achieving the goal. But not all the five factors have the same or equal effect with the funding goal, some factors have more power, some factors have less power. Of which, three major factors are project information, founder's social network, and the founder's funding goal. Of course, crowdfunding is operated through using the Internet network, founders and backers or investors do not make a decision by meeting each other directly. For instance, some big platforms are Indiegogo or Kickstarter, or Vietnam platforms are comicola or betado. Furthermore, because of based on the Internet, so the number of via friends or social network friends of founders is a key highlight that effects with the success. A higher number of friends, maybe higher ability to reach the funding goal, they knew people before or at least have a connect by social network. Especially, Vietnam saw a dramatical increase in the number of Internet users or Facebook users or Twitter users. For example, nearly statistic result shows the percentage of Vietnamese people adult using the Internet around five hours per day and approximately 90% population using the Internet. People prefer to make via friends and chatting box by talking face-to-face or connect with real people. As the results, network factor becomes more important in the success of the crowdfunding project. In addition, based the knowledge in the research of Douglas J. Cumming about the crowdfunding models: Keep-It-All vs. All-Or-Nothing. That means, it is two main models that people should choose when they raise money through crowdfunding method. Almost platforms use the second method (All-Or-Nothing), it means that within in period of project time if the campaign cannot get to the beach or at least get money equal to pre-goal that they set up, they will receive nothing, So, when launching the project on the platform, founders and their team need to plan specifically about the goal how much money that project can raise or the ability of founder's goal can meet it in the real situation.

Comparing to the results of a study by Mollick (2014), the results of our research are the difference with the conclusion of Mollick about the network size or founder's social network: In our research, we examine the situation in Vietnam, and the results tell that founder's social network or the amount of via friends have a positive impact on the project succeed. Meanwhile, Mollick results show that "This result shows that having no Facebook account is better than having few online connections, suggesting that, while individuals may strategize about whether or not to link accounts to Facebook, large networks are associated with successful fundraising." With the funding goal factor, both types of research have the same conclusion. This factor has a negative influence on the success of the project. If the purpose or expectation of the founder is very high or impossible in the facts, it will lead project face with the risk which it cannot raise enough money or failure. Although information Vietnam is a new crowdfunding market, whether project succeeds or fail, the owner does not update the information. It is difficult to examine and test or check the efficiency of the crowdfunding market in Vietnam due to several reasons: i) Vietnam is a developing country, the technological system is constructing and improving, and other sectors need to develop more in the future; ii) legal system of Vietnam still simple and do not aim the right objective. With crowdfunding, Vietnamese Government should plan, test and check processes to set up the law for crowdfunding; iii) Crowdfunding is very popular and maybe become one of the most important ways that foreign people use to raise money, especially in the USA, United Kingdom, or in Japan.

5. Conclusion

Crowdfunding is becoming a hot seeking money trend around the world; many countries encompass developed and developing countries that they use this method efficiency. So, Vietnam is a developing country should apply this trend but need to adjust for convenient with facts in Vietnam to maximize the benefits and minimize the risk from method to develop the economy.

References

Arolas, E. E., & ´n-de-Guevara, F. G.-L. (2013). Towards an integrated crowdsourcing definition. *Journal of Information Science*, 189-200.

Brüderl, J. & Preisendörfer, P. (1998), Network support and the success of newly founded businesses, *Small Business Economics*, 10, 213–225

Belleflamme, P., Lambert, T., & Schwienbacher, A. (2013). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*.

Cordovaa, A., Dolcib, J., & Gianfrate, G. (2015). *The determinants of crowdfunding success: evidence from technology projects*. 3rd International Conference on Leadership, Technology, and Innovation Management (pp. 115-124). Procedia-Social and Behavioral Sciences. https://doi.org/10.1016/j.sbspro.2015.04.872

Drabløs, C. (2015). What influences crowdfunding campaign success (Master's thesis, Universitetet i Agder; University of Agder).

InfoDev. (2013). *Crowdfunding's Potential for the Developing World. Washington, DC: Finance and Private Sector Development Department*, World Bank.

Leboeuf, G., Schwienbacher, A., Cumming, D. (2015). *Crowdfunding Models: Keep-It-All vs. All-Or-Nothing*. Working paper.

VEPR. (2018). Vietnam economics Report, 4th Quarter 2018

Valanciene, L., & Jegeleviciute, S. (2013), Valuation of crowdfunding: benefits and drawbacks, *Economics and Management*, 39-48.

Wroldsen, J. S. (2012). The Social Network and the Crowdfund Act: Zuckerberg, Saverin, and Venture Capitalists' Dilution of the Crowd.

European Commission (2017), Identifying market and regulatory obstacles to crossborder development of crowdfunding in the EU, retrieved at: https://ec.europa.eu/info/sites/info/files/171216-crowdfunding-report_en.pdf

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 363-378
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.93

The Accounting Standardization System for Public Administrations and the Impact of their Adoption on Higher Education in Portugal

Maria da Conceição da Costa Marques, PhD[1]

[1] Coordinating Professor na ISCAC Coimbra Business School. Email: mmarques@iscac.pt, Phone: +351239802000

Abstract
The Accounting Standardization System for Public Administrations (SNCAP) was approved by Decree-Law no. 192/2015 (DL) of September 11 and constitutes the new accounting system for public administrations. With the approval of the SNC-AP, it will be possible to implement the accrual basis in accounting and financial reporting of public administrations, articulating it with the current modified cash basis, establishing the grounds for a state budgeting on an accrual basis. According to the legal regime of higher education institutions (RJIES), there are university teaching institutions and institutions of polytechnic education. In this way, HEIs adopting the SNC-AP will have to prepare the opening balance sheet for the 2018 financial year in accordance with the new regulations, which implies a set of adjustments to the last balance prepared according to the POC-Educação.

Keywords: Public Accounting, SNC-AP, Public Administrations, Reform, Higher Education Institutions

1. Introduction

The Accounting Standardization System for Public Administrations (SNCAP) was approved by Decree-Law no. 192/2015 (DL), dated September 11 and constitutes the new accounting system for public administrations, scheduled for January 1 2017. However, it was postponed until January 1, 2018[1]. The Local Authorities benefited from a specific regime for the adoption of the SNC-AP, with implementation scheduled for January 1, 2019.

The reasons for the emergence of these accounting regulations are presented (in the approval document itself), the existence of a strong fragmentation and outdated accounting standardization for the public sector. It is recognized in the same law that fragmentation is a serious problem of technical inconsistency as it affects the efficiency of public sector accounts consolidation and entails many undesirable adjustments that question the reliability of the information in its integration. It is more concerned that this This problem is felt throughout the public sector, albeit with a particular focus on entities such as the Directorate-General for the Budget, the Directorate General of Local Authorities and the National Institute of Statistics, which have to aggregate information produced on the basis of budgetary information systems and financial instruments that are inconsistent in order to build macroeconomic

[1], Decree-Law no. 85/2016 of 21 December.

indicators, which are indispensable for decision-making in budgetary and monetary policies at European Union (EU) level.

With regard to the reform that this new financial information system advocates, high expectations are raised regarding its impact on Portuguese public accounting, as it is stated in the text of the aforementioned decree that it solves the fragmentation and inconsistencies that currently exist, while at the same time providing public administrations with a more efficient and more convergent budgetary and financial system with the systems that are currently being adopted at the international level.

With the approval of the SNC-AP, it will be possible to implement the accrual basis in accounting and financial reporting of general government, articulating it with the current modified cash basis, establishing the grounds for a state budgeting on an accrual basis, fostering harmonization to institutionalize the State as an entity reporting, through the preparation of budgetary and financial statements (FSs), on an individual and consolidated basis, to increase the alignment between public accounting and national accounts and to contribute to meeting the needs of users of the information system accounting and budgetary and financial reporting of general government.

Also with this new accounting standard, it will be possible to standardize procedures and increase the reliability of account consolidation, in line with the rules of private companies (SNC) and non-profit sector (SNC-ESNL).

The SNC-AP includes the subsystems of budget accounting, financial accounting, and management accounting. The elaboration of the SNC-AP contemplates, in particular:

- A conceptual structure of public financial information;
- Public accounting standards converging with IPSAS;
- Models of financial statements;
- A rule on budgetary accounting;
- A multidimensional chart of accounts;
- A management accounting standard.

This article intends to analyse the public accounting reform in Portugal based on the SNC-AP, in the impacts that it will determine in public higher education institutions (IES) at the accounting level in relation to the previous POC-Educação regime and also the resources involved in implementation.

Thus, in point one will be presented the methodology adopted in the elaboration of the article, in point two a brief exposition is made on the evolution of public accounting, with reference to the POC-Educação, in point 3 is presented the Accounting Standardization System for Public Administrations (SNC-AP) and the main aspects of this document are developed, the point four is related to the Budget Framework Law and point 5 is dedicated to HEIs and the procedures that these institutions will have to follow in order to implement the SNC-AP, since it is a reform in relation to the system they were adopting.

2. Methodology

Research is a research process in which an issue is raised and systematically proceed to collect, analyse, interpret, and communicate the information that answers the question. For the elaboration of this article, the research method was based on the collection of information, through a literary revision to respond to the objectives of the present study, using scientific journal articles, conference articles, Web pages, books and dissertations in the field of public accounting in order to illustrate the state of the art.

It was chosen a qualitative approach, considering that it is an investigation to study a social phenomenon, frequently used in investigations in the area of organizational studies, because it seeks to understand and explain the observed practices. It is also characterized by its interpretative or critical nature as it works on qualitative methods. It also serves to illustrate certain topics within an evaluation, through a descriptive approach, to explore situations in which the intervention, being evaluated, does not present a clear and unique set of results (Quivy & Campenhoudt, 1995; Yin, 2005).

According to Bogdan & Biklen (1994), a qualitative investigation focuses mainly on the understanding of the problems, so that we can establish a more enlightening understanding of our object of study.

In relation to documentary analysis, the study was based on official sources such as legal diplomas or institutional reports, as well as scientific articles written by reputed authors of the area, with the intention of framing the subject in question, as well as collecting reliable data that allow realistic interpretation of the current functioning of the accounting systems and the accountability of HEIs.

3. Public Accounting

3.1 Background

During the sixteenth, eighteenth and nineteenth centuries, reforms and profound accounting changes were made that led to the introduction of double entry accounting in public finance management. However, in Portugal, the method of registration used in public accounting was practically always based on the cash basis. With the revolution that resulted in democracy in 1974, the entire legal system of the budget system was reformulated. The information disclosed in the financial statements would now have a higher level of requirement. With the entry of Portugal into the European Union, a restructuring in public accounting has become urgent.

The Reform of State Financial Administration (RAFE) began in the 1990s and led to a change in the way pensions are thought. This change had the immediate change to the second constitutional revision of 1989, where budget information was included, and program budgeting was foreseen. This reform has introduced in Public Accounting, management by objectives and increased economy, efficiency, and effectiveness, along with innovation, creativity and rigor (Hood, 1995, Silva, 1994, p.211).

The administrative modernization that some public entities assumed in the 1990s [when the reform process in the Public Administration (PA), referred to above was verified], not adequately accompanied by an evolution in public accounting, made certain entities aware of the need the use of an approximate accounting and analytical accounting to that used in the private companies that used the Official Accounting Plan (Silva, AP & al, 2007). In order to respond to the felt needs arising from the development of the new model of financial management, we have seen the creation of several sectoral plans for the main subsectors of public services, namely:

- In 1991, the Official Plan of Accounts for Health Services (POCSS) was published, by order of the Ministry of Health, and revised in 1996;
- In 1993, through Decree-Law no. 226/93 of June 22, the Official Chart of Accounts for Municipal Services and Municipal Federations was published;
- In 1995, a working group was set up as the objective of elaborating a Draft Official Plan of Accounts for Public Higher Education Institutions (PPOCIES) (Nogueira, 2005).

These changes necessitated the development of new information and control instruments leading to the publication of the POCP in 1997, which added accounting rules for all central, regional and local government departments and bodies as well as social security.

The POCP was approved by Decree-Law no. 232/97, of September 3. The document contemplates the adoption of the base method of the addition, or digraphic method, with integration between budgetary accounting, equity accounting, and analytical accounting, in articulation with the unigraphic method, of cash base existing at the date.

3.2 The Official Plan of Public Accounting for the Education Sector (POC-Educação)

The POC-Education emerged from the POC-P and was approved by Administrative Rule no. 794/2000, of September 20th. The aim of this publication was to increase the quantity and quality of accounting information to different users, to harmonize accounting procedures, to make information comparable, to consolidate public accounts, and to implement budgetary, equity and analytical accounting systems, which would result in a single public accounting.

The accounting model underlying the POC-Education provided the necessary elements to the leaders to reinforce educational policies adequate to the growing demands of today's society, a felt need until the reform of public accounting (Marques, 2002). The publication of this chart of accounts establishes a system of budget accounting and its rules of movement, identifies the need to apply the principle of substance on the form for certain cases, as well as approve the rules of consolidation of accounts of public groups, and standards for the implementation of analytical accounting are also foreseen.

The POC-Educação was adopted by all HEIs and will be in force until the adoption of the SNC-AP, which started on 01.01.2018.

4. The Accounting Standardization System for Public Administrations (SNC-AP)

4.1 Characterization

Two decades after the approval of the POCP, the SNC-AP emerges, which allows public administrations to provide a more efficient and more convergent budgetary and financial system with the systems that are currently being adopted at an international level. In the diploma of approval, it is affirmed that the accounting normalization in Portugal for the public sector is currently outdated, fragmented and inconsistent, a situation that results from the advance of the Accounting Standardization System (SNC), towards the adoption of norms adapted from the norms international accounting standards (IAS / IFRS). This situation affects the efficiency of the consolidation of public sector accounts, which involves many adjustments that are not desirable, and that question the reliability of the information provided (Carvalho and Simões, 2016).

The SNC-AP was approved by Decree-Law no. 192/2015 of September 11 and its application is mandatory for all services and bodies of central, regional and local administration that do not have the nature, form, and name of the company, to the sub-sector social security, and reclassified public entities.[2]

The SNC-AP includes:

Table 1 - Elements of the SNC-AP

Conceptual structure of financial accounting	Multidimensional Plan of Accounts (PCM), consisting of a summary table of accounts of classes 1 to 8
25 Financial Accounting Standards (NCP): NCPs 1 to 25	Models of Budget Statements
NCP 26 - Accounting and Budget Report	Models of financial statements
NCP 27 - Management Accounting	A set of harmonized models for presentation of financial statements and budget statement (included in NCP 1 - Structure and content of Financial Statements and NCP 26 - Accounting and Budget Report, respectively).

Source: own elaboration

Notwithstanding the aforementioned elements are of general application, such application may not be adequate from the point of view of the Cost/benefit relationship, when dealing with smaller entities and low risk, and a simplified standard specific to this type of entity has been approved.

In relation to POCP, this new accounting system presents several differences since it involves the normalization of the various sectoral plans; the concentration in class 0 of all budget accounting operations; the elimination of pass-through accounts, the balances of all budgetary accounts having relevant and meaningful information for the

[2] "Reclassified public entities" means entities which, regardless of their form or designation, have been included in the subsectors of central, regional, local and social security of general government, within the framework of the European System of National and Regional Accounts, in the last published by the national statistical authority.

user; reflection on the digraphic accounting of all phases of budget execution and allocation of specific accounts budget reporting; does not present the developed class 9[3], since it is of optional use.

The approval of the SNC-AP allowed the implementation of the accounting and financial reporting base of the general government, articulating it with the current modified cash basis. On the other hand, it aims to establish the grounds for state budgeting on an accrual basis, while fostering accounting harmonization. Another of its objectives is to institutionalize the State as a reporting entity (with the creation of the state accounting entity - ECE), it recommends the preparation of budgetary and financial statements on an individual and consolidated basis, as well as to increase the alignment between public accounting and the national accounts and contribute to meeting the needs of the users of the information system of accounting and reporting budget and financial.

The SNC-AP recommends the fulfilment of management, analysis, control, and information objectives, namely (Article 6 of DL 192/2015):

- Demonstrates budget execution and performance against fiscal policy objectives;
- Allows a true and fair view of the financial position and the respective changes, financial performance and cash flows of an entity;
- Provides information for the determination of public service expenditures;
- Provides information for the preparation of all accounts, statements, and documents that have to be sent to the Assembly of the Republic, the Court of Auditors and other control and supervision entities;
- Provides information for the preparation of accounts in accordance with the European System of National and Regional Accounts;
- It allows financial control, legality, economy, efficiency, and effectiveness of public expenditure;
- Provides useful information for management decision making.

The qualitative characteristics of financial reporting are attributes that make financial information useful to users of financial statements and achieve the objectives of financial reporting. The main qualitative characteristics are relevance, reliability, comprehensibility, timeliness, comparability, and verifiability. These qualitative characteristics apply to all financial and non-financial information reported, including historical and prospective financial information, and explanatory notes.

Comparing with the CNS, the same terminology is used, although they present differing assumptions and qualities, further deepening some aspects related to the differences between each sector, which can be analysed in the following table:

Table 2 - Characteristics and assumptions SNC / SNC-AP

SNC-AP	SNC
	Accrual basis (assumption)
	Continuity (assumption)
Relevance . Financial and non-financial information . Confirmatory and predictive function	Relevance
Reliability . Faithful representation of economic phenomena and others: when the description of phenomena is complete, neutral and free of material errors. . Neutrality: the absence of influences; . Conditions of uncertainty and estimates; . Information free of material errors.	Reliability . Reliable representation . Substance on the form . Neutrality . Prudence . Fullness . Materiality
Comprehensibility	Comprehensibility
Comparability	Comparability
Verifiability	
Opportunity	

Source: adapted from Santos & Saraiva (2016)

[3] Traditionally intended for analytical accounting subsystem.

There are, however, constraints on the information included in the financial report, namely:

- Materiality - the information is material if its inaccuracy or omission can influence the decisions of the users of the FSs;
- Cost-benefit - financial reporting entails costs, and the benefits must justify the costs of obtaining it;
- The balance between qualitative characteristics - these work together to contribute to the usefulness of financial information.

It should be noted that public entities have several characteristics that distinguish them from other entities, which should be considered in the creation of the Conceptual Framework (EC) for the SNC-AP. Noteworthy are transactions without consideration, which are transactions in which there is not directly, in exchange, goods of the same amount, such as tax receipts; the State Budget and budget execution, which distinguishes public entities from private entities. Budget information becomes important to its users by allowing a comparison between revenue and expenditure and analysing its execution. The EC determines the concepts present in the creation of public accounting standards (NCP) applicable to the preparation and presentation of financial statements of Public Entities.

The objectives of the JV are to: (a) assist those responsible for the financial statements in the correct use of NCPs; (b) assist in forming an opinion on the adequacy of the financial statements to the NCPs; (c) assist users in interpreting the information contained in the financial statements; (d) provide concepts necessary for the formulation of NCPs by standardizing entities. The EC is not an NCP and therefore does not explicitly establish measurement, recognition, or disclosure criteria. If there is a conflict between the conceptual structure and an NCP, the requirements of the NCP prevail over the conceptual structure.

The EC contemplates aspects such as: objectives of the financial statements; qualitative characteristics that determine the usefulness of FSs information; definition of the reporting entity; elements of FSs; recognition of FSs elements and measurement of FSs assets and liabilities.

The elements of the financial statements to be considered in the SNC-AP are:

Table 3 - Elements of the Financial Statements

Element	Definition
Asset	It is a resource that the entity controls as a result of a past event.
Liability	It is an obligation that arises from a past event that could generate an outflow of resources.
Revenues and expenses	Revenues are increases and expenses are decreases in net worth.
Net worth	Corresponds to the aggregate value of its assets, net of liabilities, with reference to the date of the financial report.

Source: Own elaboration

4.2 Measurement of the Elements of Financial Statements

The recognition of an item in the financial statements implies the allocation of a monetary amount and implies the selection of an appropriate measurement basis.

Measurement is the process of determining the monetary amounts through which the elements of the financial statements are recognized and shown in them.

The purpose of the measurement is to select the measurement bases that more appropriately reflect the cost of services, operational capacity and financial capacity of the entity in a manner that is useful for accountability and for the decision. It is not possible to select a single measurement basis for the FSs, which allows maximizing the extent to which the information contained therein satisfies the objectives of the financial statements and allows them to adequately balance the qualitative characteristics of the financial statements. The measurement bases defined in the SNC-AP can be observed in the following figure:

Table 4 - Basis of measurement

Bases of Measurement	Assets	Historical cost	
		Current value	. Market value . Replacement Cost . Net realisable value . Value in use
	Liabilities	. Historical cost . Cost of Compliance . Market value . Cost of Liberation . Assumption Price	

Source: own elaboration

FSs have as their main objective to provide useful information to the users of the financial information, for the purposes of accountability and decision making. Through financial reporting, users seek information on the financial position, financial performance, cash flows, service provision, as well as financial and non-financial prospective information and explanatory information (PWC, 2015).

Regarding financial reporting, government accountability is important because it is significant for increasing economic growth and development around the world, just as it is important for building and maintaining trust. The public sector accounts for about 1/3 of GDP in most countries, and public enterprises often account for more than half of GDP. However, public financial reporting is different due to the need for transparency in government financial statements, which are increasingly important to the public interest. On the other hand, resources should be used on behalf of citizens, and should be used efficiently and effectively. Government resources come primarily from citizens / taxpayers, and government activities are not pursued for profit, capital is not invested to generate monetary returns, and the assets are not used to generate future cash-flows.

A reporting entity can distinguish between who is responsible for preparing the financial statements, who is responsible for their presentation and disclosure, and who is responsible for their approval.

A complete set of individual or consolidated financial statements in the SNC-AP comprises:

- A balance;
- A statement of results by nature;
- A statement of changes in equity;
- A statement of cash flows; and
- An annex to the financial statements (notes comprising a summary of significant accounting policies and other explanatory notes).

The financial statements should appropriately present the financial position, financial performance, and cash flows of an entity. The appropriate presentation requires the faithful representation of the effects of transactions, other events, and conditions, in accordance with the definitions and criteria for recognition of assets, liabilities, income and expenses established in the Conceptual Structure and in the NCP. The financial statements should allow comparative analysis with respect to the prior period for all amounts reported in the financial statements. NCP 1 - Structure and Contents of Financial Statements require certain disclosures in the financial statements and uses the term "disclosure" in a broad sense, encompassing both items presented in the balance sheet, income statement, statement of changes in equity and statement of financial position. cash flows, either in the annex.

Public entities are also required to prepare projected financial statements, such as balance sheet, income statement by nature and statement of cash flows, in the same format as historical FSs, which must be approved by the relevant management bodies. The financial and budgetary statements are subject to legal certification of accounts (article 10 of DL 192/2015 of September 11).

4.3 Public Accounting Standards (NCP)

The Public Accounting Standards can be grouped as follows:

Table 5 - NCP grouping

Descrição	Normas
Regarding the form and content of presentation of the Financial, Budget and Management Report	NCP 1, 2, 20, 25, 26 e 27.
Associated with non-current assets	NCP 3, 5, 6, 8 e 9.
Associated with transactions common to any public or private entity such as inventories, financial instruments, employee benefits, provisions, income with consideration (sales)	NCP 7, 10, 11, 12, 13, 15, 16, 17, 18, 19.
As for the consolidation of subsidiaries, investments in associates and other investments	NCP 21, 22, 23 e 24.
Finally, a group aimed at more specific matters in the public sector, such as tangible and intangible assets that represent historical heritage, public domain assets and infrastructure, concessions, unrepresented revenues (from taxes, fees, transfers and subsidies) and impairment of non-cash-generating assets	NCP 3, 4, 5, 9 e 14.

Source: Own elaboration

NCPs 1 to 25 are based on International Public Sector Accounting Standards (IPSAS), issued by the International Public Sector Accounting Standards Board, an International Federation of Accountants (IFAC) Board. IPSAS are global financial reporting standards for the public sector (not including public enterprises) and aim to establish and promote adherence to high quality professional standards, promote future international convergence of standards, with the intention of the whole world, from the perspective of financial statements of general use and talk about issues of public interest where the voice of the profession is more relevant.

4.4 Public Accountant

When the SNC-PA was published in 2015, the role of the public accountant was established in order to ensure technical regularity in the accountability of departments and bodies and in the performance of public accounting by the public accounting officer. According to the Statute of the OCC, approved by Law no. 139/2015 of September 7, Accountants are "the professionals enrolled in the Order ... being exclusively assigned the use of this professional title, as well as the exercise of their profession ... ". (Article 9)

Competencies of the professional in the public entities (article 10)
"... exercise, in exclusive, the following activities: a) Plan, organize and coordinate the execution of the accounting of entities, public or private, who have or who must have organized accounting ...; b) Take responsibility for technical regularity, in the accounting and tax areas ...; c) Sign, together with the legal representative of the entities referred to in point a), their respective financial statements and tax returns, ... ".

Decree-Law no. 192/2015 of September 11, approving the SNC-AP, defines the regulatory framework of this professional, stating that it ensures "technical regularity in the rendering of accounts of the services and bodies" and "execution of public accounting "(Article 8, paragraph 1).

The functions of this professional "are assumed by the intermediate manager responsible for accounting and, in his / her absence, the selected employee of the integrated technician career with specific training in public accounting (article 8, paragraph 2).

Also, "workers who, at the date of entry into force of this decree-law, are responsible for public accounting" are exempted from the frequency of initial specific training (Article 8 (3)).

Since the SNC-AP is already implemented in many public entities in the year 2018, little is known about this figure of the public accountant and who should assume these functions within the institutions. According to the Court of Auditors (2016), "the requirements for the exercise of the function of the public accountant in the SNC-AP are not sufficiently clarified in view of the powers and responsibilities which are assigned to it," an expression with which we agree.

4.5 Simplified scheme

Article 2 of DL 192/2015 states that the simplified regime is "applied to entities that, within the scope of the SNC-AP, fulfill the requirements to be small entities or micro entities, provided that the former do not opt for the general regime and the latter for the scheme or the simplified scheme for small entities ". Small Entities are considered to be those that present a Budget Exit of over € 1,000,000 and less than or equal to € 5,000,000. Micro-entities are those whose budget expenditure does not exceed € 1,000,000, inclusive.

In terms of financial reporting, the following entities apply to small entities: NCP-PE; NCP 26 - Accounting and Budget Report; NCP 27 - Management Accounting; Multidimensional Chart of Accounts. Micro entities apply to NCP 26, and it is necessary to disclose inventory of assets.

4.6 Budget Accounting

The budget accounting is based on NCP 26 - Accounting and Budget Report, with the objective of monitoring the implementation of the State Budget. Two cycles are considered: the budget revenue cycle and the expenditure budget cycle. In the first one are those of inscription of prediction of the prescription, liquidation, and reception. In the second stage, the phases corresponding to the Inscription of the budget allocation, appropriation, commitment, obligation, and payment are defined, which must be out of time. The principle of budget balance, whereby revenue must always be greater than or equal to expenditure, applies.

Regarding budget classifiers, paragraph 1 of NCP 26 states that these are the "structuring element of the budget management system, as they define how budgets are presented, executed and reported, having a direct correlation with transparency and coherence of the budget."

In terms of recognition and measurement, appropriations and forecasts are recorded after approval of the budget, with entries in budget accounts being made at cost and amounts recorded at their face value. The double entry applies where each debt corresponds to a credit.

The budget records are made in the class zero provided for in NCP 26. Accounts 011 and 021 are only used to record the initial budget and are only traded once. It then moves to the available appropriations (expenditure) and corrected forecasts (revenue). The table below shows an example of postings to be made:

Table 6 - Movements in budget accounting

Approval the Budget Revenue	011 – Initial prevision	012 – Corrected prevision
	014 – Pending prevision	011 – Initial prevision
Approval of the Expenditure Budget	022 – Corrected Endowment	021 – Initial Endowment
	021 – Initial Endowment	024 – Available Endowment

Source: Own elaboration

It should be noted that in the balance of account 014 (Pending prevision) it is possible to identify the revenue that has not yet been collected and the balance of account 025 (commitments) shows the balance that is still available for fitting.

Class 0 of the SNC-AP includes specific accounts for the Register of Treasury Operations - account 07 - which is intended for inflows and outflows of cash that do not represent budget execution operations, such as taxes, as well as Contingent Liabilities - account 09.

For the purpose of closing the accounts, the NCP 26 defines the procedures to be followed, namely regarding the cancellation of cabins; the transition from balances to subsequent periods; pay off the budget accounting sub-accounts, close the budget and assess budgetary performance.

4.7 NCP 27 - Management Accounting

This standard aims to establish the basis for the development of a management accounting system in the PA, giving guidelines for its structure and development and defining the minimum requirements for its content and disclosure. It is intended to produce relevant and analytical information on costs to satisfy the information needs of public managers in decision making.

It should be noted that although analytical accounting has been a mandatory system for several years (DL 155/92 of 28 July in Article 16) it stated that departments and bodies should organize analytical accounts as a management tool and subsequently other standards have made analytical accounting mandatory for certain sectors), there is, in fact, no widespread implementation of such a system, so the adoption of this standard in the PA is to be expected.

4.8 The Multidimensional Chart of Accounts

The Multidimensional Chart of Accounts (PCM) ensures the classification, recording, and reporting of transactions and events in a standardized, systematic, and consistent manner. It seeks to support the classification, registration and presentation of comparable, reliable and relevant information, at least for the following purposes: (a) provision of information on the nature of public revenue and expenditure for reporting purposes in relation to estimates in the budget, as well as support for the assessment of budgetary performance; (b) preparation of general purpose financial statements through the financial accounting subsystem; (c) preparation of the register of assets and rights of the General Government and calculation of the respective depreciation and amortization (Replaces CIBE); (d) support for the preparation of the management report accompanying the individual and consolidated accounts; (e) support for the preparation of national accounts (statistical aggregates). (Viana et al., 2016).

It defines the accounts to be used in budget accounting (nature of expenditure and revenue), financial accounts, national accounts, and for the purposes of registering goods and rights.

From the same account code - Classes 1 to 8 - information on an accrual basis (financial accounting and national accounts) and on a modified cash basis (budget accounting) is obtained simultaneously. In the same account, the difference in values between the record in budget accounting and in financial accounting translates the difference between the two optics or recording times[4]. It should be noted that other income and expense accounts and assets and liabilities are included in classes 1 to 8, which are never recorded on a cash basis (e.g., depreciation and impairment losses).

The PCM presents a structure, as close as possible, to the chart of accounts of the SNC, in order to facilitate the consolidation of accounts. It has accounted for specific government operations (for example, public domain assets, transfers and allowances, and tax revenues, contributions, and fees), as a rule on accounts whose second digit is "0" (zero). These accounts facilitate the accounting process of consolidation of accounts, as well as the creation of specific accounts relating to the registration of public domain assets, allow information on the assets of Public Administrations, identifying what they use, what belongs to them and what can be alienated.

The PCM is designed to provide specific levels of disaggregation to meet sectoral needs (e.g., health, education, local government or social security), while ensuring homogeneity of core accounts.

[4] It should be noted that DL 26/2002, of February 14 - economic classifier of public revenues and expenditures continues to be used, so it is not yet taking advantage of this functionality.

The account 25 - Debtors and Creditors for the Budget Execution, which was included in the POCP and sectoral plans revoked, was eliminated, and these transactions are now included in Class 0 for the subsystem of budget accounting, which now covers all phases of revenue and expenditure (see NCP 26 - Accounting and Budget Report).

Likewise, in this chart of accounts, the accounting information requirements of the National Accounts were met, especially for reporting purposes in accordance with SEC2010, (including reporting requirements under the Excessive Deficit Procedure).

A summary table of Class 1 to 8 accounts is also included in the PCM to record transactions and events in financial accounting and, in the future, to classify operations by nature in budget accounting, a codified list of accounts (Code of Accounts) of the Classes 1 to 8, a table of correspondence between the budget headings and the PCM accounts, a table of correspondence between the PCM accounts and the main ESA accounts, an entity classifier (Supplementary classifier 1), a classifier of assets and rights for purposes of registration and respective useful lives (Additional Classifier 2). Supplementary Classifier 1 defines codes for the categories of entities with which a public entity may have operations related to financial investments, loans, interest, transfers and subsidies, and complementary classifier 2 defines the rules to be used in the typology of assets and rights, for the purpose of recording and calculating amortization of depreciation, replaces Administrative Rule 671/2000, April 17, which approved the CIBE - Cadastre and Inventory of State Property. This classifier contains the codes for the recording of tangible, intangible and investment property, recorded in Class 4 of the financial accounting subsystem, the respective useful lives to be used as reference by entities, in particular in the application of the depreciation / amortization of the straight line, intangible fixed assets, intangible assets and investment properties.

The first digits coincident with PCM Class 4 accounts; for the purpose of registration, most accounts are disaggregated in order to provide a better identification of the elements included therein; the entity must also create other codes that will easily identify the way of acquiring and locating the assets, as well as a registration form for each asset, which should include a set of information related to each asset[5].

5. The Law on the Budgetary Framework

Law 151/2015, of September 11, reforms the Budgetary Framework Law (LEO), publishing a new regulation that repeals the previous Budgetary Law, Law 91/2001, of August 20. This Act now approved, which does not change the previous Budgetary Framework Law, but repeals it (although some parts of the new Law do not apply immediately), significantly changes the budget process.

It is a reform of the public budgetary architecture, such as a reform of the Budgetary Framework Law. The reform produced by Law 151/2015, has two main aspects: on the one hand, to initiate genuine program budgeting in Portugal; (hereinafter referred to as the Treaty on Stability, Coordination, and Governance in Economic and Monetary Union), among others (Sarmento, 2016).

---

[5] This should include:
Identification and location of the property (by building, office, ...)
Code corresponding to this table, plus the year of the acquisition or 1st registration and serial number
Type of acquisition (purchase, donation, transfer, transfer, ...)
Initial value and subsequent valuation values (revaluation or major repairs),
Depreciation/amortization criteria, annual rate, depreciation per year and total, impairment losses per year and total Current amount
Each property must be registered and inventoried per se, provided that it constitutes a part with autonomous functionality and can be sold individually; if these conditions are not met, it must be registered in a group of goods; in the individual file must refer to the quantity of goods in the case of the option for a group of goods in the same sheet.
The Registration Data of the assets must be updated until the slaughter of these; (sale, donation, theft, destruction or demolition, transfer, exchange or barter, ..), as well as the organ and date of decision and slaughter shall be identified in the slaughter.
Movable property must be identified with a label with the identification corresponding to item b) of the contents of the File.
The measurement criteria to be used should correspond to those defined in their respective NCPs (NCP 3 - Intangible Assets, NCP 5 - Property, Plant and Equipment, and NCP 8 - Investment Property).
Depreciation and amortization correspond to the normal devaluation of fixed assets, resulting from the use of the fixed assets, and, as a rule, the straight-line method should be used, considering the useful life of reference in this classifier.
In the case of buildings, for the purposes of calculating their depreciation rates, the value of the land is excluded or, in the case of land, the part of the value not subject to depreciation; in relation to properties acquired without express indication of the value of the land, the value to be attributed to it is set at 25% of the total value, unless the entity estimates another value based on calculations duly substantiated and sanctioned by the competent authority.

The new Act also seeks to ensure that program budgeting is in fact, focused on achieving results, which can be evaluated by indicators, changing the functioning paradigm of public administration.

There is a link between LEO and the SNC-AP, as we can see in Title VI of the new Law is legislated on matters relating to accounting, reporting, control, and transparency. Thus, article 62 deals with the general principles of the accounting system, which, according to article 63, includes budgetary, financial and management accounting, stating that the State organizes budgetary accounts for all its revenues and expenditures, a financial statements for all its assets, liabilities, income and expenditure, and prepares individual and consolidated financial and budgetary statements that provide a true and fair view of budget execution, financial position, changes in financial position, performance and cash flows.

In addition, public entities should prepare budgetary and financial statements that provide a true and fair view of budget execution, financial position, changes in financial position, performance, and cash flows.
Article 65 provides that ECE and public entities shall prepare, by March 31 of the year following the fiscal year to which the accounts refer, the respective accounts rendered to the member of the Government responsible for the area of finance, the member of the Governing Body and the Court of Auditors.

The accounting documents include: The management report; the budgetary and financial statements; other documents required by law.

The new Act strengthens the powers of the Public Finance Council, but also makes the macroeconomic forecasts underlying the entire budget year more relevant.

6. Implementation of the SNC-AP in Institutions of Higher Education (HEI)

6.1 Context

According to the legal regime of higher education institutions (RJIES)[6], there are university teaching institutions and institutions of polytechnic education. The first set up universities, university institutes and other institutions of university education, which are high-level institutions oriented to the creation, transmission, and diffusion of culture, knowledge and science and technology, through the articulation of study, teaching, research, and experimental development. The second includes polytechnic institutes and other institutions of polytechnic education and are high-level institutions oriented to the creation, transmission, and diffusion of culture and knowledge of a professional nature, through the articulation of study, teaching, guided research, and experimental development.

RJIES contemplates a restructuring of the organic structure and internal power of universities and polytechnics, which has profoundly changed the way in which HEIs in Portugal are managed. The governing bodies are the General Council, a collegial body with internal and external representatives, and the Rector. The Senate is now optional and merely advisory. The power of the Rector is greatly strengthened.

The model underlying this new governance sets out management principles that tend to lead to greater efficiency and effectiveness. However, many doubts still remain in this model, that is, in relation to which of the alternatives provided in the law - public university and public foundation - will lead to a greater degree of efficiency.

It is in the context of analysing some of the conditions assumed by HEIs in statutory processes, in particular as regards the characteristics of the management body (a combination of strong central management, strong management of the units that comprise them and a clear structure of relations school, with encouragement to a self-guided and self-confident school), which equates the implementation of the SNC-AP.

HEIs have been developing their accounting based on POC-Educação and have organized the accounting system to respond to the needs of internal and external users. With the adoption of the SNC-AP, the main users of the

[6] Approved by Law 62/2007, of September 10.

financial information are the users of the services and their representatives, the providers of resources and the taxpayers and their representatives. Financial information may also provide useful information to other users, such as: statistical authorities, financial analysts and consultants, the media and other stakeholder groups can obtain useful information for their own purposes. There are also other users, namely regulatory and supervisory bodies, audit, supervisory and control bodies, parliamentary committees and others, can use the information in the financial statements for their own purposes.

In terms of accountability and decision-making, service users and resource providers need information to help them assess matters such as the performance of the public entity during the reporting period, liquidity (satisfaction of obligations long-term obligations) of public entities and the sustainability of services rendered by public entities in the long term. They also aim to assess whether public entities are using resources economically, efficiently and effectively, whether the aggregate, quantity, and cost of services provided during the reporting period are appropriate, as well as whether current levels of taxes and other resources are sufficient to maintain the volume and quality of the services provided.

In this way, taxpayers and other resource providers want to know whether the stated objectives have been achieved by taking into account the resources obtained during the reporting period; whether current operations are being financed from the resources of taxpayers, funders or other sources in the current period; and whether they are going to need more or less resources in the future and what are the most likely sources of resources. On the other hand, funders and creditors will need information to assess the liquidity of public entities, and hence, whether the amounts and repayment dates will be met as agreed. Donors will also need information to assess whether public entities are using resources economically, efficiently, and effectively, and as planned.
Therefore, since HEIs have a wide range of users interested in the financial information they prepare (generally known as stakeholders), it is necessary that the implementation of the SNC-AP and the definition of parameters and requirements.

6.2 Internal Control System

The internal control system to be adopted by public entities shall include, inter alia, the organizational plan, policies, methods and control procedures, as well as all other methods and procedures defined by those responsible for orderly and efficient manner, including safeguarding assets, preventing and detecting situations of illegality, fraud and error, the accuracy and completeness of accounting records and the timely preparation of reliable budgetary and financial information.

6.3 Transition from the previous standard to the SNC-AP: procedures to take into account

It is the responsibility of all public entities to ensure the conditions of transition to the new regulations. The Instruction Manual (IM) (2017) contains, in particular, the description of the transition process for the SNC-AP and guidance guides for the application of the respective standards. In the absence of a specific NCP, account should be taken of IPSAS 33 - First adoption of IPSAS by virtue of the provisions of Article 13 on the integration of loopholes, as well as the preamble to Administrative Rule No. 189/2016, of July 14, regarding the useful lives of property, plant and equipment (except buildings and other constructions).

In this way, HEIs adopting the SNC-AP will have to prepare the opening balance sheet for the 2018[7] Financial year in accordance with the new regulations, which implies a set of adjustments to the last balance prepared according to the POC-Educação.

Therefore, the IAS adopting the SNC-AP for the first time must recognize all assets and liabilities recognized by public accounting standards, recognize items as assets only if they are permitted by public accounting standards, reclassify items which were recognized in accordance with the Official Public Accounting Plan, or sectoral plans, in one category, but according to public accounting standards belong to another category, as well as apply the standards of public accounting in the measurement of all assets and liabilities recognized.

[7]The municipalities were granted a postponement of the implementation of the SNC-AP to 01.01.2019, according to circular of the Secretary of State of Local Authorities, of December 28, 2017.

Adjustments resulting from changes in accounting policies should be recognized in the balance of retained earnings in the period in which the items are recognized and measured, and public entities should also recognize the corresponding adjustments in the previous comparative period (paragraphs 3 and 4 of article 14 of DL 192/2015.
In the transition year, there is a set of disclosures that need to be made. According to NCP 1 in the first SNC-AP implementation reporting period (in subsequent periods not necessary), the following disclosures should be made: (a) how the transition from previous regulations to NCPs affected the financial position and financial performance and reported cash flows; (b) reconciliation of the net assets reported under previous regulations to the net assets according to the NCPs, between the date of transition to the NCPs and the end of the last period presented in the most recent annual financial statements prepared in accordance with previous regulations; (c) reconciliation of the result reported under previous regulations, relative to the last period of the most recent annual financial statements, with the result under the NCP for the same period; (d) recognition or reversal, for the first time, of impairment losses when preparing the opening balance sheet in accordance with the NCPs (disclosures which, according to item 9 of the notes template provided for in NCP 1, would be required if recognition of these impairment losses or reversals occurred in the period beginning on the date of transition to the NCPs); (e) distinction in the reconciliations between items (b) and (c) between the correction of errors committed in previous periods and changes in accounting policies in accordance with previous regulations (if applicable); and (f) whether the first financial statements in accordance with the NCPs are (or are not) the first financial statements presented (CNC, 2017).

In the transition to SNC-AP, there is no obligation to restate the comparison according to the SNC-AP (MI, 2017, pp. 40-41). This option causes the comparability in the year of transition to be lost, and it is resumed with the financial statements the following year. This option of not reshaping the comparative is provided in IPSAS 33 - First-Time Adoption of Accrual Basis[8], which the CNC understood to integrate in the transition to the SNC-AP. Such an attitude is based on a cost-benefit analysis, in which the cost of preparing such information would outweigh the benefit of having comparable information.

In the transition to the new accounting standards, the IMM (2017, page 43) admits that in the transition to NCPs an entity can choose the measurement at fair value, considering this fair value as the considered cost, when the cost of the following assets or liabilities:
a) Inventories NCP 10;
b) Investment properties, if the entity chooses the cost model provided in NCP 8);
c) Property, plant, and equipment NCP 5;
d) Intangible assets, other than those generated internally and that comply with:
    i. The recognition criteria set forth in NCP 3, except for the measurement of the cost with reliability;
    ii. The criteria associated with the existence of an active market that provides information for the determination of fair value.
e) Financial Instruments NCP 18;
f) Assets for the concession of services NCP 4.
g) However, even if there is reliable information about the cost, the rural or urban buildings should be measured in the transition to the SNC-AP by its Tax Asset Value (PTV). The VPT is a model for evaluating buildings that is considered to provide information that meets the qualitative characteristics of the financial information provided in the EC.
h) The smaller entities and budgetary risk covered by the simplified regime provided for in article 5 of Decree-Law no. 192/2015, of September 11, will apply the same principles as entities of the general regime in the transition to the SNC-AP, as outlined above (MI, page 51).
i) Public entities will also have to make transitional adjustments to the level of the Budget Accounting, respecting the requirements emitted in the MI, as well as in NCP 26 - Accounting and Budget Report.
For the change to NCPs to be a success, the commitment of all those involved in change, knowledge of information technologies, training, and skills is necessary.

[8]IPSAS 33 provides transitional exceptions for entities that adopt IPSAS on a first-time pay basis, providing an important tool to assist entities in the process of implementing ISPSAS.

Conclusions

Accounting standardization in Portugal for the public sector is currently outdated, fragmented and inconsistent, as a result of the SNC's move towards the adoption of standards adapted from international accounting standards (IAS / IFRS). This situation affects the efficiency of the consolidation of public sector accounts, which involves many undesirable adjustments and that question the reliability of the information provided.
The SNC-AP has attempted to resolve the fragmentation and inconsistencies that currently exist and allows the various institutions of the Public Administration to provide a more efficient and more efficient budgetary and financial system with the systems that are currently being implemented at the international level.
Public Accounting Standards 1 to 25 are based on IPSAS with which greater utility, reliability, comparability, and transparency of information, and more responsibility for managers are expected.
The HEIs see developing their accounting based on POC-Educação and organize the accounting system in order to respond to the needs of internal and external users. With the adoption of the SNC-AP, the main users of the financial information are the users of the services and their representatives, the providers of resources and the taxpayers and their representatives. Financial information may also provide useful information to other users, such as: statistical authorities, financial analysts and consultants, the media and other stakeholder groups can obtain useful information for their own purposes.
With the SNC-AP, the alignment between public accounting and national accounts increases. There will be a single standard for all public administrations, which will allow better comparability across all sectors.
The SNC-AP allows standardizing the procedures and increasing the reliability of account consolidation by approaching the SNC and the SNC-ESNL, applied in the context of the private sector and non-profit sector entities, respectively.

References

Bogdan, R., Biklen, S., (1994). Investigação Qualitativa em Educação – uma introdução à teoria e aos métodos. Porto: Porto Editora.

Carvalho A., Carreira J. (2016), "Considerações sobre o impacto do novo modelo contabilístico (SNC-AP) nas contas das autarquias locais", XVII Encuentro AECA, disponível em http://www.xviiencuentroaeca.ipb.pt/docs/artigos/59f.pdf

Carvalho, J. e Simões V. (2016), Formação Normativo SNC-AP. Ordem dos Contabilistas Certificados, dezembro de 2016.

Comissão de Normalização Contabilística (2017). Manual de Implementação do SNC-AP - 2.ª versão.

Hood, C. (1995), "The "new public management" in the 1980s: Variations on a theme", Accounting, Organizations and Society, Volume 20, Issues 2–3, February–April 1995, p. 93-109.

Marques, M.C.C. (2002) "Reforçar a eficiência das políticas educativas: o contributo do Plano Oficial de Contabilidade Pública para o Sector da Educação (POC-Educação)". Revista Rapp – Revista de Administração e Políticas Públicas, Vol. III, n.º 1-2, 2002.

Ministério das Finanças - Lei n.º 151/2015, de 11 de setembro.

Ministério das Finanças - Decreto-Lei nº 192/2015 de 11 de setembro. Diário da República nº 178/2015, Série.

Ministério das Finanças. Portaria nº 189/2016 de 14 de julho. Diário da República nº 134/2016, Série I.

PWC. Towards a new era in government accounting and reporting. Jul. 2015. disponível em: www.pwc.com – accessed at 25.11.2018.

Portugal. Lei n.º 139/2015 de 7 de setembro. Aprova o Estatuto da Ordem dos Contabilistas Certificados.

PriceWaterhouseCoopers (2009), "A adoção do Sistema de Normalização Contabilística (SNC): a caminho da convergência internacional", disponível em https://www.pwc.pt/pt/corporate/imagens/snc-set-09.pdf , accessed at 25.11.2018.

Quivy, R., Campenhoudt, L. V. (1995). Manual de Investigação em Ciências Sociais. Lisboa: Gradiva.

Rosa, S. (2017), "Transição de POCAL para SNC-AP e impacto no Relato Financeiro das Autarquias Locais", Revisores e Auditores, disponível em http://www.oroc.pt/fotos/editor2/Revista/78/Contabilidade2.pdf - accessed at 30.11.2018

Santos, R. J. S. & Saraiva, H. I.B. (2016). Contabilidade pública versus Contabilidade privada em Portugal – análise das estruturas conceptuais. Revista de Contabilidade, pp 55-61.

Sarmento, J. M. (2016). A Nova Lei de Enquadramento Orçamental. Almedina, Coimbra.

Silva, A. P. & al (2007). O *Balanced Scorecard* Aplicado à Administração Pública. Publisher Team. 97S-989-60 1-050-8.

Silva, M. A (2011). Contabilidade Analítica no POC-Educação: O Caso da Universidade do Minho. Universidade do Minho. Disponível em http://repositorium.sdum.uminho.pt/handle/1822/16703 – accessed at 15.12.2018

Tribunal de Contas (2016). Relatório de Auditoria n.º 13/2016, 2.ª S. Auditoria à implementação do SNC-AP. Relatório Intercalar I. Disponível em https://www.tcontas.pt/pt/actos/rel_auditoria/2016/2s/rel013-2016-2s.pdf - accessed at 15.12.2108.

Viana L., Rodrigues L., Nunes A. (2016), "O Sistema de Normalização Contabilística - Administrações Públicas – Teoria e Prática", Almedina

Yin, K. (1993), Applications of Case Study Research, London: SAGE Publications

Yin, K. (2005), "Estudo de Caso: Planejamento e Métodos". 3.ª Edição, Porto Alegre: Bookman.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 379-395
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.94

Impact of Capital on Profitability of Banks: Evidence from Vietnamese Commercial Banks

Do Hoai Linh[1], Vu Kieu Trang[2]

[1] School of Banking and Finance, National Economics University, Vietnam, 207 Giai Phong Road, Hanoi, Vietnam. Email: linhdh@neu.edu.vn
[2] School of Advanced Education Programs, National Economics University, Vietnam, 207 Giai Phong Road, Hanoi, Vietnam. Email: vukieutrang1502@gmail.com

Abstract
This study aims to investigate the impact of capital on bank profitability with evidence from Vietnamese commercial banks. With a sample of 30 Vietnamese commercial banks, the findings show the positive relationship between capital and bank profitability during the period of 2012-2018. Accordingly, the influence of capital is more pronounce in the case of small-sized banks, whereas it exerts insignificant influence on the profitability of large-sized banks. Moreover, a high degree of capital increased the profitability of private-owned banks, the impact of capital is positive and significant for the net interest margin of state-owned banks only.

Keywords: Capital, Profitability, Commercial banks, Vietnam

1. Introduction

The effect that capital exerts on the profitability of commercial banks has turned into a cause of concern recently, especially when previous literatures on this relationship appear to be mixed. Capital has functions as a tool to help banks evade future risk and as a security instrument that absorbs any contamination effect. As a result, practitioners and regulators in Vietnam should pay attention to bank capital as it is explored that holding great amount of capital forces might exert beneficial impact on bank profitability (i.e., Tan, 2016; Iannotta et al., 2007; Demirgüç-Kunt and Huizinga, 2000). For example, Lee and Hsieh (2013), investigating the linkage between capital and profitability of bank by utilizing database for banks of 42 countries in Asia from 1994 to 2008, provide empirical evidence that a rise in capital is positively correlated with profitability of bank. In the same vein, a recent study of Tan (2016) on Chinese banking industry from 2003 to 2011 indicates that highly capitalized banks experience greater profitability. Nevertheless, one may concern that possessing greater capital ratios might impose constraints on operating activities of bank, deteriorate economic development, give rise to risk level of bank, and diminish efficiency as well as profitability. Altunbas et al. (2007), analyzing the association among capital, risk as well as efficiency in the case of banks in Europe for the period of 1992 - 2000, explore that banks which are inefficient tend to possess high level of capital. Indeed, it is shown that capital is negatively correlated with profitability

(Goddard et al., 2010). Furthermore, Vu and Nahm (2013), investigate factors that affect profit efficiency of Vietnamese banks between 2000 and 2006 and find banks with too high level of capitalization experience the profit inefficiency. In the analysis, Vietnam is focused as the empirical setting for several reason. Initially, since the early 1990s, Vietnam has experienced substantial transformation due to Doi Moi policy that the government launched in 1986. Through a chain of restructuring programs according to recapitalization and deregulation, banking sector of Vietnam has been reformed to be an open market. The government has gradually loosened regulatory constraints, which is exerted on the field consisting of ceilings interest rate on deposit and loan, branching and foreign-ownership restrictions, investment portfolio limitation. Because of these characteristics, Vietnam provides a fascinating context to investigate the factor affecting the banks' efficiency with a view to enhance profitability. Therefore, the impact of capital on profitability of bank with evidence from Vietnamese commercial banks was chosen to study.

2. Literature Review

Bank profitability

Achieving high profitability is one of the key objectives of a business as profit is considered as a financial indicator that determine the effectiveness of the entire operating process, which consists of investing, manufacturing, selling activities, and also of the technical and economic management decisions. Nevertheless, to attain a compressive evaluation of business operating outcome, it is necessary to not only consider to total amount of profit but also the linkage between profit and capitals, assets and resources that utilized to generate the profit. Hence, profitability ratio of firms is of great interest to managers, investors as well as other stakeholders. Profitability is one of the measurements of firms' performance. It is utilized to establish the association between profit and the size of the business. Profitability, thus, is probably understood as the capability of a business to effectively utilize resources and capitals to generate a return on an investment. There are a number of accounting ratios are utilized in prior studies to evaluate profitability of a bank. These ratios reflect a bank's capability of generating profit relative to associated expenses. A higher value of these profitability ratios in comparison with those of either competitors or previous value of the same bank normally presents a better operating outcome. Most scholars have used return on assets (ROE), return on equity (ROE) and net interest margin (NIM) as proxies for bank profitability (i.e., Dietrich and Wanzenried, 2011; Lee and Hsieh, 2013). ROA, calculated as net income of a bank to its total assets, shows whether a bank can effectively utilize its assets to produce profit or not. Greater ROA indicates that management of a bank is able to generate profit from assets in an effective way. Return on equity (ROE), which is the ratio that most concern by equity holder as it is the return of shareholders to their equity. The ratio measures a bank's capability of producing profit by utilizing equity capital. Net interest margin (NIM) is another ratio that is used to capture the financial performance of a bank. NIM concentrates on earning profit based on interest activities and is calculated by (interest income minus interest expense) to earning assets. More specifically, NIM is the difference between the amount that a bank is received from clients, and the amount that is depositors is offered. This measurement of profitability is primarily associated with traditional activities of lending and borrowing and is in line with the conventional characterization of a bank as it serves as an intermediary which connects lenders and borrowers. Besides these popular ratios used in a number of researches on bank profitability, there are also other ratios such as fraction of other operating income to three years average assets which is used by Bitar et al. (2018) to evaluate bank profitability. The researches started earlier usually employ simple ordinary least squares to investigate bank financial performance (i.e., Mayne, 1972). Nevertheless, more recent literatures (i.e. Brewer and Lee, 1986; Altunbas et al., 2007; Iannotta et al., 2007; Berger and Bouwman, 2017;) have switched to panel technique to provide analysis bank profitability because panel data allows researchers with the larger number of observations as well as it is able to capture the relevant association among variables over time. Moreover, recent scholars (i.e., Dietrich and Wanzenried, 2011; Lee and Hsieh, 2013) even adopt advanced technique, for example, generalized method of moment or two-stage least squares to control for endogeneity problems, unobserved heterogeneity as well as dependent variables' persistence. A large literature has attempt to investigate some of key factors that affect profitability of individual bank. The corresponding literatures have concentrated their analysis on either evidence on cross-nation (i.e., Lee and Hsieh, 2013; Iannotta et al., 2007) or on the single nations' banking system (i.e., Berger, 1995). The empirical findings of the literatures mentioned above are mixed due to the difference in their datasets, period being examined, environment as well as country. Nonetheless, some mutual factors are found to be utilized to classify further the determinants of bank profitability.

Profitability belonging to individual bank is often affected by both internal and external factors. The internal factors might be the micro or bank-specific determinants of profitability. The external factors reflect macroeconomic or industry-specific factors which are anticipated to impose influence on the operation and outcome of financial institutions. According to prior studies, variables, for example, growth of deposit, size of bank, costs of funding and type of ownership are utilized as internal factors that influence bank profitability (i.e., Dietrich and Wanzenried, 2011; Lee and Hsieh, 2013). Dietrich and Wanzenried (2011) assess the factors that affects profitability of 372 Switzer commercial banks from 1999 to 2009 and find a significant influence of yearly growth of deposit and funding costs on bank profitability. Additionally, bank size is taken into consideration as another factor affecting profitability. Pasiouras and Kosmidou (2007), who investigate European banks, explore size positively influence bank's profitability. The reason is large-sized banks tent to obtain higher level of product and loan classification in comparison with small banks, which enable them to attain benefit from economies of scales. However, Micco et al. (2007) state that relative size of bank has no influence on the return on assets as the estimated coefficient is not statistically significant. There's empirical evidence that whether a bank is owned privately or by the government does have influence on its financial outcome (Micco et al., 2007). In developing countries, banks possessed by the government are likely to experience lower profit, lower margins, and higher overhead costs in comparison with banks owned privately. Iannotta et al. (2007) also provide the similar finding that private-owned banks experience greater profitability than banks owned by the government Regarding to macroeconomics determinants, the variables normally used are the inflation rate, growth rate of GDP and real interest rate (i.e. Dietrich and Wanzenried, 2011; Lee and Hsieh, 2013). Tan and Floros (2012) introduce the relationship between profitability of bank and inflation in banking industry of China. Their findings suggest that inflation is significantly associated with bank profitability. Additionally, according to Albertazzi and Gambacorta (2009), the GDP growth rate is explored to exert a positive impact on the return on equity (ROE) of banks. Lee and Hsieh (2013), studying on Asian banking over the period from 1994 to 2008, also find that real interest rate significantly affects bank profitability.

Bank capital

Bank capital is considered by regulatory consensus as a tool that guarantees the ability of a bank to protect itself against risk (Demirguc-Kunt et al., 2013). Banks holding more capital are capable of absorbing losses with their own business by using their own resources, without experience insolvency or need for a bailout with public funds (Demirguc-Kunt et al., 2013). Also, it is stated that the bank's probability of financial distress can be diminished by possessing greater capital (Diamond and Rajan, 2000). There are numerous definitions of bank capital. The ratio that commonly used as proxy for bank capital in previous literatures to assessing the effect of bank capital upon operating outcome is equity to assets ratio (i.e., Berger, 1995; Lee and Hsieh, 2013; Dietrich and Wanzenried, 2011; Berger and Bouwman, 2013). Nevertheless, there are other capital ratio that recently utilized to provide a more in-depth investigation of the influence of dissimilar kind of capital on performance of bank. Bitar et al. (2018), examining whether high capital ratios effectively help diminish risk and enhance the efficiency as well as profitability of banking institutions, utilize nine definition of capital so that they can determine which are the most efficient kind of capital ratios in elevate banking industry. The authors consider the ratio calculated based on the

Basel guideline by utilizing risk-weighted assets and then calculate the similar ratios but replace risk-weighted assets by total assets as well as tangible equity ratio. The ratios that are used in the study of Bitar et al. (2018) are: Tier 1 over risk-weighted assets; Tier 1 plus Tier 2 over by risk-weighted assets; common equity divided by risk-weighted assets; other capital divided by risk-weighted assets; Tier 1 over total assets, Tier 1 plus Tier 2 divided by total assets; common equity divided total assets; other capital to total assets; Tangibility equity divided by total assets. Additionally, Demirguc-Kunt et al. (2013) investigate if high capitalization enables banks to experience greater stock returns in financial crisis period. The researchers use other alternative capital ratios including: the risk-adjusted regulatory capital ratio; the Tier 1 regulatory ratio; the leverage ratio; the Tier 1 ratio and Tier 2 leverage ratio; the tangible common equity ratio. Economic literatures provide extensive discussion on how capital affects performance of bank (i.e., Berger and Bouwman, 2013; Mehran and Thakor, 2011; Tan and Floros, 2013). Firstly, it is found that there is a significant impact of capital on the probability of banks' survival. For example, Berger and Bouwman (2013) examine the correlation between capital and financial outcome of banks in US and indicate that small banks possessing high degree of capital experience high propensity of survival. Secondly, banking studies suggest that the effect that capital has on market share is positive (Mehran and Thakor, 2011) because highly capitalized banks have more advantages in competing for deposits and loans more compared to others (i.e., Calomiris and Mason, 2003; Kim, Kristiansen, and Vale, 2005). Thirdly, in crisis period, capital serves as an important tool to elevate the operating outcome of medium and large banks over the bank crisis period. It is stated that before the crisis, capital has no significant effect on banks' stock returns, however, during crisis period, a high degree of capital is related to better stock market performance (Demirguc-Kunt et al., 2013). Further, Mehran and Thakor (2011), developing a dynamic model of bank capital structure to analyze the association between capital and bank value, explore that bank's equity capital is positively related to bank value. Moreover, bank risk is significantly influenced by level of capital (i.e., Lee and Hsieh, 2013; Tan and Floros, 2013; Brewer and Lee, 1986; Jahankhani and Lynge, 1979). As suggested by Lee and Hsieh (2013), capital appears to negatively and significantly associated with risk, whereas its relationship with profitability is positive. Similarly, Tan and Floros (2013) who assess how bank efficiency, risk, and capital relate to each other for commercial banks in China by utilizing panel data framework, indicate that the level of capitalization has adverse impact on bank risk. On the contrary, it is argued that there is a positive relationship among bank capital and risk (i.e., Pettway, 1976; Shrieves and Dahl, 1992; Rime, 2001; Iannotta et al., 2007). Pettway (1976) adopting regression analysis to assess capital adequacy of the United State banks and bank holding firms during 1971 to 1974, shows that risk is significantly and positively affected by equity to total assets ratio of banks. Shrieves and Dahl (1992) also apply U.S database and come up with the conclusion of similar positive finding. The positive impact that capital exerts on bank risk is also supported by the studies of Rime (2001) and Iannotta et al. (2007), which employ database on European banks. Ultimately, bank efficiency is mentioned to be positively affected by capital (i.e., Fiordelisi et al., 2011; Sufian, 2010; Staub et al., 2010; Tan and Floros, 2013; Chortareasa, 2012). In particular, Fiordelisi et al. (2011) use the GMM estimators to conduct investigation on European banking and come to the conclusion that high level of capital has positive correlation with bank efficiency. In the same vein, the beneficial effect of capital on efficiency of bank is stated in the study of Sufian (2010) who do research on Chinese banking sector by adopting data development analysis (DEA), panel data and Tobit regression. Chortareasa et al. (2012) also give support to the notion of the positive relation among bank capital and efficiency by assessing the sample of banks belonging to 22 European countries.

Relationship between capital and profitability

The linkage between capital and bank profitability has been widely discuss in the literature (i.e., Altunbas et al., 2007; Goddard et al., 2010; Demirgüç-Kunt and Huizinga, 1999; Iannotta et al., 2007). According to previous empirical findings, the way that of bank capital influence profitability appears to be mixed. On the one hand, capital is indicated expert positive effect on profitability (i.e., Berger, 1995; Demirgüç-Kunt and Huizinga, 1999;

Iannotta et al., 2007). Berger (1995) closely investigate the capital-earning relationship in banking by employing the database of commercial banks in U.S during the period 1983-1989. The author concludes that capital and earnings have a strong association, and that each variable positively Granger-caused the other. There is likelihood that a rise in capital leads to a growth in income and vice versa. Demirgüç-Kunt and Huizinga (1999), examining factors that affect interest margin and profitability of commercial bank for 80 countries in the year 1988-1995, document a that capital significantly and positively influence net interest margin and profit before tax to total assets. In the same vein, Iannotta et al. (2007) finds that capital impose a significant and beneficial effect on profit of banks. More recently, Lee and Hsieh (2013), analyze the influence that capital has on financial performance of banks in Asia, provide evidence that capital affects net interest margin and net interest revenue over average assets of banks positively. The view of positive influence capital exert on profitability is also supported by the research conducted by Chortareasa et al. (2012) who investigate European banking and figure out that net interest margin is positively affected by the level of capital.

By contrast, the above-mentioned views have been challenged by other perspectives, which indicate banks that are inefficient tend to embrace greater capital (Altunbas et al., 2007). Indeed, Pettway (1976) adopting regression analysis on the database of United State Commercial banks. The author finds that capital requirements diminish the efficiency in operation of banking system. The reduction in operational efficiency will subsequently negatively affect profitability of banks. Additionally, Goddard et al. (2010) doing research on eight member countries in European Union in the period of 1992-2007, explore that capital ratio negatively affects profitability, which indicates the standardized risk-return payoff that more highly capitalized banks have low-risk level, and thereby are likely to experience less return. Furthermore, it found that a bank's profit efficiency of is hindered by a too high level of capitalization by Vu and Nahm (2013) who investigate the factors influencing profit efficiency of Vietnamese banks in the period of 2000-2006.

3. Methodology

3.1. Data collection

The database of this research includes 30 Vietnamese commercial banks in the period of 2012 to 2017. Secondary data is utilized for this study. The banks' financial data are acquired from the annual financial report belonging to 30 commercial banks collected by Viet stock. Also, Vietnam's macro factors are retrieved from World Bank. The financial and non-financial data in term of bank level include types of bank ownership (state-owned, private-owned), bank internal factors (return on assets, return on equity, net interest margin, annual deposit growth, banks' size, funding cost). Macroeconomics factors consist of annual GDP growth rate, inflation rate, domestic credit to private sector.

The reason the period of 2012 to 2017 is chosen to investigate the impact of capital on bank profitability is that in the year 2012, based on decision No. 254 / QD-TTg dated March 1, 2012, the Prime Minister accepted the project "restructure the system of credit institutions in the period 2011-2015 "(hereinafter referred to as Project 254). This project has set goals for the 2011-2015 period is to "focus on constructing strong financial status and reinforce the operational capacity of credit institutions, enhance the degree of safety and efficiency of credit institutions' performance, enhance order, discipline and market principles in banking operations." To accomplish this goal, the project provided orientation and solution to reorganize the system of credit institutions for different group of credit institution. The commercial banks with the role and position of dominating the system of credit institutions must implement specific solutions including: (1) continue to promote the equitization of state-owned commercial banks; (2) increase scale and financial capacity; (3) enhance asset quality, control credit quality and reduce level of bad debt; (4) innovate banking control system; (5) modernize baking technology system; (6) continue to expand branch network and transaction points; (7) check and strengthen key business activities; (8) diversify approaches of raising capital, manage credit growth to be suitable with source of capital; (9) rapidly develop management team, executive and high-quality staffs. As the project significantly affected the baking industry of Vietnam, the period from 2012 to 2017 provides us an interesting setting to assess the association between bank capital and profitability in Vietnam.

Estimation methods

To investigate the effect of capital on profitability of bank, panel data regression model is employed in which bank profitability is regressed on capital. In addition, other control variables of bank internal factors are also incorporated (*Deposit growth*, *Size*, *Funding cost*, *Ownership*) and macroeconomics factors (*GDP growth*, *Inflation*, *Lend*) that have some impact on profitability of bank and are commonly used in literatures (i.e., Lee and Hsieh, 2013; Dietrich and Wanzenried, 2011). Bank fixed effect is also included into the models. The regression models presented as follow:

$$ROA_{it} = \beta_0 + \beta_1 Capital_{it} + \beta_2 Deposit\ growth_{it} + \beta_3 Size_{it} + \beta_4 Funding\ cost_{it} + \beta_5 Ownership_{\ it} + \beta_6 GDP\ growth_{it} + \beta_7 Inflation_{\ it} + \beta_8 Lend_{it} + \varepsilon_{it} + \square_{it} \quad (1)$$

$$NIM_{it} = \beta_0 + \beta_1 Capital_{it} + \beta_2 Deposit\ growth_{it} + \beta_3 Size_{it} + \beta_4 Funding\ cost_{it} + \beta_5 Ownership_{\ it} + \beta_6 GDP\ growth_{it} + \beta_7 Inflation_{\ it} + \beta_8 Lend_{it} + \varepsilon_{it} + \mu_{it} \quad (2)$$

Where bank profitability of bank i at time t is proxied by return on assets (*ROA*) and net interest margin (*NIM*). $Capital_{it}$ is the level of bank capital, measured by the equity-to-asset ratio. $Deposit\ growth_{it}$ is annual growth rate of deposit. $Size_{it}$ is natural logarithm of bank's total asset. $Funding\ cost_{it}$ is interest expense over average total deposit. $Ownership_{\ it}$ is dummy variable takes value of 1 if the State own more than 50% of shares. $GDP\ growth_{it}$ is annual growth rate of GDP. $Inflation_{\ it}$ is annual inflation rate. $Lend_{it}$ is domestic credit to private sector. ε_{it} is bank fixed effect. μ_{it} is the residual term.

3.2 Descriptive statistic

3.2.1 Summary statistic

Tab 1. Summary statistic

	Observations	**Mean**	**Standard deviation**	**Min**	**Max**
ROA	178	0.5323	0.4503	-1.28	2.3926
NIM	178	2.6487	1.1772	-1.98	7.3
Capital	178	0.0911	0.0412	0.0133	0.2384
Deposit growth	177	26.2946	28.9513	-11.9426	210.7
Size	178	32.3114	1.1638	30.3178	34.723
Funding cost	178	0.0726	0.0367	0.0075	0.232
Ownership	180	0.2111	0.4092	0	1
GDP growth	180	0.0606	0.0059	0.0525	0.0681
Inflation	180	0.0467	0.0262	0.0088	0.0909
Lend	180	1.0973	0.1371	0.9483	1.3072

Table 1 demonstrates the summary statistic for banks' profitability, banks' internal factors, and macroeconomic factors. The mean, maximum value, minimum value, and standard deviation are documented for each variable.
In term of dependent variable, the average ROA of the sample is 0.5323, and the lowest ROA is -1.28 belonging to Vietbank in 2014 in comparison with the highest ROA of 2.3926 in 2017 achieved by Techcombank. Further, net interest margin has an average of 2.6487. The standard deviations for ROA and NIM are 0.4503 and 1.1772. Generally, the average ROA and NIM possessed by the banks in the database can be considered to be fairly good, since their mean are above 0.

Regarding to bank internal factors, the mean of capital is 0.0911 (9.11%), meaning that the portion of equity in bank' total asset is relatively low. The standard deviation of bank capital is quite low, which is only 0.0412. This indicates that there is a small difference between capital ratio in each Vietnamese commercial bank. Besides, deposit growth has the average value of 26.2946, which indicates that on average, the amount of deposit in banks increase over years. The lowest and highest value of deposit growth are -11.9426 belonging to Asia Commercial Joint Stock Bank in 2012 and 210.7 achieved by Bac A Bank in 2012, respectively. Additionally, size of banks has mean of 32.3114 and ranges from 30.3178 to 34.723. Finally, the funding cost of banks has minimum and maximum value of 0.0075 and 0.232. The standard deviation of deposit growth, size, and funding cost are 28.9513; 1.1638, 0.0367, respectively.

With the respect to macroeconomic factors, the value of GDP growth ranges from 0.0525 to 0.0681, and its mean is 0.0606, suggesting that on average Vietnam's GDP has increased over the period being examined. The sample has an average inflation rate fluctuating from 0.0088 to 0.0909 and average value of 0.0467. The mean of domestic credit to private sectors is 1.0973, and its maximum and minimum value are 1.3072 and 0.9483. This shows that private sector is received a high amount of credit for development. The standard deviations are 0.0059, 0.0262, and 0.1371 for GDP growth, inflation, and lend, respectively.

3.2.2 Correlation matrix

Tab 2. Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	*ROA*	1									
2	*NIM*	0.6399	1								
3	*Capital*	0.166	0.3826	1							
4	*Growth deposit*	-0.1188	-0.2274	0.0519	1						
5	*Size*	0.1342	-0.1177	-0.7464	-0.1699	1					
6	*Funding cost*	-0.0019	0.0183	0.3361	0.3475	-0.3463	1				
7	*Ownership*	0.1601	0.0776	-0.2508	-0.0444	0.4841	-0.2138	1			
8	*GDP growth*	-0.1474	-0.2088	-0.3079	-0.3415	0.1938	-0.5639	0.0155	1		
9	*Inflation*	0.2183	0.2404	0.2784	0.337	-0.1632	0.6371	-0.0513	-0.7044	1	
10	*Lend*	-0.0834	-0.1727	-0.3111	-0.3056	0.2026	-0.4677	0.0921	0.6402	-0.6715	1

The correlation matrix is utilized to present the relation among variables as well as investigated whether there is occurrence of multicollinearity issue in regression models. If the multicollinearity problem occurs in the model, it will cause a number of severe problems such as: the precision of the estimated coefficients is reduced, which weakens the statistical power of regression model or the conclusion of confident interval is unreliable and normally smaller than the precise confident interval.

Table 4.2. demonstrates the results of correlation matrix. It is found that the association between capital and return on assets (*ROA*) as well as net interest margin (*NIM*) of bank is positive. Among these relations, capital has the strongest effect on net interest margin with the correlation coefficient of 0.3826. The correlation matrix also shows that the correlation coefficient of two variables *Inflation* and *GDP growth* is highest, with the value of -0.7044 - the average correlation level. Other independent variables have lower level of correlation compared to this value. There are even relatively low correlation levels, such as the correlation coefficient between *Ownership* and *GDP growth* is 0.0155. According to Kennedy (2008), multicollinearity is a critical issue when the correlation is higher compared to 0.8. Therefore, it can be indicated that no strong correlation exists among independent variables, and the multicollinearity does not occur in regression models.

3.3 Regression results

Hausman test

The Hausman test is developed to give assistance in deciding on electing between the fixed effects and random effects approach. The hypotheses of the Hausman test are:

H0: Random effects are consistent and efficient

H1: Random effects are inconsistent (fixed effect will be always consistent)

The F-test is adopted to test the hypotheses. When the p-value is greater compared to 0.5, the null hypothesis should not be rejected, implying the choice of random effect. Adversely, when the p-value is smaller compared to 0.5, the null hypothesis should be rejected, which indicates that fixed effect should be employed when regressing models.

Fig 1. Hausman test

```
Test:  Ho:  difference in coefficients not systematic

                  chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       14.90
              Prob>chi2 =       0.0372
```

Fig 1. presents the result for Hausman test that provide assistance in deciding on electing between the fixed effects and random effects approach for model 1. The p-value is found to be smaller compared to 0.1. Hence, the null hypothesis can be rejected, suggesting the utilization of fixed effect for model 1.

Fig 2. Hausman test

```
Test:  Ho:  difference in coefficients not systematic

                  chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       16.11
              Prob>chi2 =       0.0241
```

Fig 2. reports the result for Hausman test assisting for an election between the fixed effect and random effect approach for model 2. It is indicated the p-value is smaller compared to 0.1. Thus, the null hypothesis can be rejected, recommending the adoption of fixed effect for model 2.

Consequently, according to the findings of Hausman test for model 1 and model 2, fixed effect approach is employed when regressing the models in order to provide assessment of the relation between capital and profitability of bank.

The impact of bank capital on profitability

Tab 3. Panel data regression of capital and profitability of bank

	ROA	NIM
VARIABLES	(1)	(2)
Capital	6.8951*	13.0654**
	(3.5119)	(5.8857)
Deposit growth	-0.0017*	-0.0066*
	(0.0010)	(0.0035)
Size	0.5921**	0.3207
	(0.2668)	(0.7510)
Funding cost	1.6837	4.4535
	(1.3030)	(4.3237)
Ownership	0.0571	0.3766
	(0.0992)	(0.2272)
GDP growth	16.9172	35.5503
	(10.8046)	(21.0038)
Inflation	6.0850***	10.9472**
	(1.8701)	(4.8954)
Lend	-0.4775	-0.7003
	(0.3705)	(1.1126)
Constant	-20.0969**	-11.0275
	(8.8079)	(23.7202)
Bank fixed effect	YES	YES
R-squared	0.2633	0.3127

Observations	177	177
Note: Robust standard errors in parentheses Significant level: * p < 0.1, ** p < 0.05, *** p < 0.01		

In order to explore the impact of capital on profitability of banks, panel data regressions models with bank fixed effect approach as suggested by Hausman test are employed. The regressions are run respectively for each measure of profitability: *ROA* and *NIM*. The findings of regression models are provided in *Table 4.3*.

The estimated coefficients on *Capital* for models with *ROA* and *NIM* as dependent variable are statistically significant as well as has value of 6.8951 and 13.0654, respectively. This means that if *Capital* changes by 1 unit, it would raise *ROA* and *NIM* by 6.8951 and 13.0654 respectively, with the assumption that the other factors remain unchanged. The sign of these coefficients provides evidences of positive impact of bank capital on *ROA* and *NIM*, which are similar to the results of Lee and Hsieh (2013); Dietrich and Wanzenried (2011). As explained above, highly capitalized banks experience great profitability since they have high creditworthiness, involve in prudent lending, and have less demand for external funding. Moreover, capital is considered as a tool to help banks protect themselves against risk and enhance the management quality, which ultimately enable banks to generate higher earnings.

In term of bank internal factors, the estimated coefficients on *Funding cost* and *Ownership* are not significant for all three models, suggesting that the cost of funding and ownership status of bank do not have impact on banks' profitability. However, growth of deposit of banks significantly affects their profitability. It is found that the estimated coefficient on *Deposit growth* is -0.0017 and -0.0066 for models with ROA and NIM as dependent variable, respectively. This suggests that rise in deposit exerts a negative effect on *ROA* and *NIM*. As explained above, the growth in deposit might associated with the investment in lower credit quality assets and attraction of additional market competitors, which thereby negatively influence profitability of bank. Further, there is a positive estimated coefficient on size of bank, yet size has significant influence on ROA only. Banks with large size could experience lower risk, greater economies of scale as well as have capability of accessing less expensive capital in comparison with small-sized banks. Given this, larger the bank size will lead to higher profitability.

Regarding to macroeconomics factors, the results show that inflation significantly and positively affects both *ROA* and *NIM* as the value of estimated coefficient of *Inflation* for model 1 and 2 are 6.0850 and 10.9472, respectively. This indicates that the increase in inflation will help elevate banks' profitability. By contrast, *GDP growth* and *Lend* appear to have insignificant effect on bank profitability.

The values of R-squared for model 1 and 2 are 26.33% and 31.27%.

The impact of bank capital on profitability across different size classes

Tab 4. Panel data regression of capital and profitability of bank across different size classes

	Small-size banks			Large-size banks	
	ROA	NIM		ROA	NIM
VARIABLES	(1)	(2)		(3)	(4)

Capital	9.4572*	17.8758*		10.2962	4.0308
	(4.5907)	(9.3815)		(8.9367)	(7.9679)
Deposit growth	-0.0012	-0.0040		-0.0023	-0.0051
	(0.0014)	(0.0038)		(0.0023)	(0.0031)
Size	1.1496**	0.9625		0.4524	-1.2965**
	(0.4129)	(1.2191)		(0.3870)	(0.5417)
Funding cost	1.2964	0.9711		3.4993	12.0451***
	(1.5829)	(4.6401)		(2.5250)	(3.7506)
Ownership	0.1777*	0.0807		0.1296	0.1636
	(0.0988)	(0.2735)		(0.1613)	(0.2701)
GDP growth	19.0267	40.7089		20.8686	33.5863
	(14.2035)	(33.5456)		(16.3988)	(35.1138)
Inflation	8.2603***	16.7749*		4.4336	2.8341
	(2.4207)	(9.1398)		(2.9882)	(7.2525)
Lend	-0.8506	-1.0988		-0.4704	0.9332
	(0.5171)	(1.7194)		(0.5375)	(1.2955)
Constant	-37.3817***	-31.6155		-16.3078	41.5735**
	(12.8197)	(37.5093)		(13.6432)	(17.5756)
Bank fixed effect	YES	YES		YES	YES
R-squared	0.4049	0.4103		0.1836	0.4138
Observations	89	89		88	88
Note: Robust standard errors in parentheses Significant level: * p < 0.1, ** p < 0.05, *** p < 0.01					

In this section, following previous literature (Slovin, 1992), the sample is further divided into two subsamples according to the medium of commercial banks' size in order to assess whether there is difference in the influence of capital on profitability across diverse size classes. The regression findings are provided in Table 4 Column 1-2 show the results for small banks (size equal or smaller the median size of all commercial banks). Column 3-4 present the results for large banks (size larger than the median size of all commercial banks).

The regression results demonstrate that Capital imposes a consistently positive and significant influence on profitability of small-size banks. By contrast, Capital appears to exert no visible effect on profitability of banks possessing large size. These results are consistent with prior study of Berger and Bouwman (2013), which indicates that in normal times, capital helps enhance the profitability of small banks.

A possible interpretation is under the circumstance of banks with large size, size might be considered as a source of economic strength for them, similarly to capital, and that each has reducing marginal value. Moreover, large banks are able to depend on financial market access and correspondent as well as other interbank relation besides their on-balance-sheet capital so as to enhance performance (Berger and Bouwman, 2013). Hence, the profitability of banks with large size will not be affected by their capital. On the other hand, for small banks, higher capital ratio is related to greater profitability. As discussed by Berger and Bouwman (2013) capital is important for small banks since they encounter shocks more often compared to large-sized banks and capital can act as a vital mechanism of defense against their damaging shocks. Additionally, small banks also experience constrained and relatively expensive access to the financial market in comparison with large banks. Possessing a high capital-to-asset ratio might help these banks increase their creditworthiness and then reduce funding cost as well as the demand for external funding (Dietrich and Wanzenried, 2011), which thereby elevate the performance.

Other controls variables also provide additional important insights. Initially, bank size imposes a significant and beneficial effect on return on assets (ROA) of small banks, whereas its influence on net interest margin (NIM) of large-sized banks is significantly negative. Further, *Funding cost* only positively influence NIM of banks that have large size. Finally, while there is a positive effect of *Ownership* on ROA only, the inflation rate exerts a positively significant impact on both net interest margin and return on assets of small banks.

Almost all value of R-square is over 40%, except for the regression model 3 whose R-squared is only around 18.3%

The impact of bank capital on profitability across different type of ownership

Tab 5. Panel data regression of capital and profitability of bank across different type of ownership

	State-owned		Private-owned	
	ROA	NIM	ROA	NIM
VARIABLES	(1)	(2)	(3)	(4)
Capital	0.8309	19.8495**	7.4953*	12.9672**
	(2.5005)	(8.6854)	(3.7948)	(6.2693)
Deposit growth	0.0016	-0.0010	-0.0016	-0.0069*
	(0.0038)	(0.0056)	(0.0010)	(0.0036)
Size	1.0287	0.8205	0.6984**	0.2589
	(0.6098)	(0.7397)	(0.3020)	(0.8887)
Funding cost	9.2056***	29.5045***	1.3038	3.1340
	(1.5109)	(3.7798)	(1.3344)	(4.3319)

GDP growth	-7.7588	-12.7972	20.5949	49.0012*
	(12.3894)	(20.5510)	(12.9201)	(26.2467)
Inflation	-1.3858	-7.6994**	7.3287***	14.1095**
	(1.7078)	(3.5311)	(2.1104)	(5.9353)
Lend	-1.6560	0.2874	-0.6013	-0.8866
	(1.1633)	(1.9291)	(0.4227)	(1.2274)
Constant	-31.9226	-26.8554	-23.5833**	-9.6636
	(19.0348)	(23.5578)	(9.9135)	(27.8292)
Bank fixed effect	YES	YES	YES	YES
R-squared	0.5940	0.8218	0.2805	0.3105
Observations	36	36	141	141

Note: Robust standard errors in parentheses
Significant level: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In order to provide a more in-depth examination on the effect that capital impose on bank profitability, in this subsection, the sample is further divided into two subsamples, which are state-owned banks and private-owned banks. Table 5 provides the results for regression models. Column 1-2 show the results for state-owned banks, whereas column 3-4 present the results for privately owned banks. According to the regression results, signs of estimated coefficients on *Capital* are found to be in line with the main result, which indicate that the influence that capital exert on profitability of bank is positive. This impact is significant for ROA and NIM of private-owned banks and NIM of state-owned banks, however, for ROA of banks possessed by the government, this impact is insignificant. A possible reason for this outcome is that the government-owned banks might enjoy benefits from some sort of the government guarantee. It is believed that state-owned banks are strongly protected by the government. Faccio et al. (2006), analyzing the tendency of the government bailouts of 450 politically related firms from 35 nations from 1997 to 2002, indicate that politically related firms tend to be bailed out compared to similar non-related firms. Arguably, if the government, as the owner of the banks, has responsibility for a bank's solvency, the intervention of the government is higher. Moreover, because of the strong protection that the government provides, state-owned banks experience lesser default risk compared to other banks. Indeed, Brown and Dinç (2011), examining failure of bank in 21 emerging market nations in 1990s, provide evidence that it less popular for banks owned by the government encounter default risk. As state-owned banks are likely to enjoy the advantages provided by the government, the earning of government-owned banks probably is not influenced by the level of their capital ratios, which thereby lead to the insignificant impact of capital on income to assets ratio. Nevertheless, the net interest margin of the government-owned banks is significantly affected by their equity-to-asset ratio. As it is argued that high capitalized banks normally have less demand for external funding, borrow less as well as possess the capability of engaging in prudent lending, they might able to have higher NIM in comparison with those have low capital level. With regard to other explanatory variables, growth of deposit appears to have a negatively significant effect on NIM of private banks. By contrast, bank size exerts a positive effect on ROA of private banks. While *Funding cost* significantly and positively influence ROA and NIM of state-owned banks, *GDP growth* only impose a significantly positive effect on NIM of private banks. The inflation rate significantly and negatively affects NIM of the government-owned banks, whereas its influence on ROA as well as NIM of privately-owned banks is positive. The values of R-squared for four models are around 59.40%, 82.18%, 28.05%, and 31.05%, respectively.

Discussion of results

The aim of the research is to provide investigation of the impact of capital on bank profitability over the period 2012-2017. To obtain this objective, the panel data regression model is employed. Particularly, in this research, the main regression results are provided by fixed effect approach. According to the findings of Hausman test in section 4.2.1, the fixed effect method is selected as an appropriate approach to estimate regression models. Therefore, this section will discuss the results of panel data fixed effect approach in order to provide a useful examination of the association between capital and profitability of bank. Based on the panel regression models which are presented in chapter 3, the influence of capital as well as other factors on bank profitability have been examined. The most remarkable outcome is that the rise in capital level results in the growth of bank profitability. This result is not only in line with a positive linkage among capital with and bank profitability which is investigated in previous empirical literatures in Asia for example: Lee and Hsieh (2013); but also consistent with prior researches in the world, for example: Chortareasa et al. (2012), Iannotta et al. (2007); Demirgüç-Kunt and Huizinga (2000). So as to elevate the stability and quality as well as promote development of banking sector, the State Bank of Vietnam has released the circular 41/2016/TT-NHNN which requires Vietnamese commercial banks to strictly follow the Basel II standard method. This requirement is expected to enhance the capital ratio of commercial banks and thereby improve their financial outcome. Indeed, capital is investigated to be an effective tool for bank to reduce risk, increase operating efficiency as well as profitability (i.e., Lee and Hsieh, 2013; Tan and Floros 2013; Fiordelisi et al., 2011; Chortareasa, 2012; Sufian, 2010; Mehran and Thakor, 2011). According to Tan (2016), highly capitalized banks are likely to possess high creditworthiness, which helps them attract a lot of customers and especially big customers. Additionally, the high tendency to engage in prudent lending of these banks might lead to lower level of bank risk. Capital also serves as an important mechanism which reduces bank risk coming from asset with higher risk such as loans. As a result, more capitalized banks tend to have lower level of bankruptcy cost (Berger, 1995) as well as high likelihood of survival (Berger and Bouwman, 2013). Further, when banks hold the high degree of capital ratio, they will possess ability to borrow less, which subsequently decrease their cost and boost the profitability. Eventually, it is indicated that banks with high capital level experience better management quality, therefore, they are able to possess high income and low cost (Iannotta et al., 2007). Consequently, the findings of regression models strongly suggest that enhancing capital ratio (measured by equity-to-assets ratio) is extremely necessary, and Vietnamese commercial banks should improve level of capital to elevate their financial performance. Besides the main results, this study also provides a more in-depth analysis by dividing the sample into subsample based on unique attributes of commercial banks, namely, bank size and type of ownership. It is found the findings are vary across different ownership status and classes of bank size. First, regarding to the size of bank, the effect that capital imposes on bank profitability is more pronounced in the situation of small-sized banks, whereas this impact is insignificant for banks with large size. More specifically, the profitability of small banks is positively influenced by higher level of capital, in other words, small banks which are highly capitalized are capable of experiencing greater profitability. For the case of large-sized banks, it is considered that size might be a source of economic strength. Moreover, banks with large size have ability of taking advantage of easy access to financial market as well as interbank relation in order to improve their performance instead of utilizing own capital (Berger and Bouwman, 2013). Thus, the level of capital might not exert significant effect on large banks. Nevertheless, in the circumstance of small-sized banks, these banks are more likely to encounter shock in comparison with large-sized banks, thus, they need to possess high capital ratio so as to prevent themselves against detrimental shocks (Berger and Bouwman, 2013). Further, compared to large banks, small banks experience more constrains and expensively access to financial market. With a high capital to

assets ratio, these banks are able to enhance creditworthiness and then diminish the limitation of accessing financial market, which thereby elevate financial outcome. Second, with respect to type of ownership, both return on assets and net interest margin of private banks are affected by capital. However, to banks owned by the government, only net interest margin is influenced. The possible reason for this is that state-owned banks are likely to enjoy the preferences and advantages that provide by the government; therefore, their performance might not be influenced by capital level. Indeed, state-owned banks are strongly protected by the government (Faccio et al., 2006), which helps them avoid encountering default risk (Brown and Dinç, 2011). As a result, the earnings of banks owned by the government is not influenced by capital level, which ultimately leads to the insignificant impact of capital on state-owned banks' return on assets. Addition to capital, there are numerous variables are utilized as determinants of commercial bank profitability. They are Deposit growth, Size, Funding cost, Ownership, GDP growth, Inflation, and Lend. The findings state that three out of seven variables significantly affect profitability of Vietnamese commercial bank. Initially, Deposit growth is found to have negative association with bank profitability. This result is supported by the explanation of Dietrich and Wanzenried (2011) that growth in deposit might be obtained by financing with assets with lower credit quality. Furthermore, higher development rate may draw the attention of additional competitors, which reduces the profitability of all participant in the market. Therefore, growth in deposit probably exerts a detrimental impact on bank profitability. Secondly, the correlation between bank size and return on assets is positive. This finding is consistent with the findings of a number of previous studies (i.e., Smirlock, 1985; Dietrich and Wanzenried, 2011; Short, 1979). Banks with large size possess capability to experience great product level and diversification in loans as well as high economies of scale (Dietrich and Wanzenried, 2011). Also, these banks have tendency to raise cheaper capital in comparison with other banks. Accordingly, there is a beneficial impact of size on bank return on assets. Thirdly, it is found that there is a significantly positive association between inflation and bank profitability. This implies that banks' manager might be capable of predicting the inflation rate and then adjust their interest rate at an appropriate value that is helpful in fostering their revenues faster in comparison with cost, which thereby achieve higher profits (Perry, 1992).
Four other control variables, namely Funding cost, Ownership, GDP growth, and Lend, are indicated to impose insignificant influence on profitability of commercial bank. Although these the results do not support prior empirical findings, it does not mean that previous findings are not appropriate. The influences of these variables on bank profitability are insignificant in the chosen period probably be consequence of the unique context of Vietnam economy in the examined period.

In conclusion, the vital conclusion reached from the panel data regression models' empirical results is that there are statistically significant evidences that high-level capital promotes the financial performance, particularly profitability, of bank during the period between 2012 and 2017.

4. Conclusion

This research assesses the relation between bank capital and profit, using data at bank-level of 30 Vietnamese commercial banks from 2012 to 2017. This research applies recent panel data techniques. The regression findings imply that the increase in bank capital is significantly and positively associated with profitability. It is also explored that dissimilar profitability variables have identical results on the persistence of profit. A possible reason for this positive relationship is that highly capitalized banks tend to have high creditworthiness, involve in prudent lending, and have less demand for external funding, which ultimately enable them to enhance profitability. Further, high level of capital helps banks protect themselves against risk and generate higher earnings.

References

Albertazzi, U., and Gambacorta, L., 2009. Bank profitability and the business cycle. *Journal of Financial Stability*, 5(4), pp.393-409.

Asteriou, D., & Hall, S. G.(2011). Applied econometrics. New York: Palgrave Macmillan
Altunbas, Y., Carbo, S., Gardener, E.P. and Molyneux, P., 2007. Examining the relationships between capital, risk and efficiency in European banking. *European Financial Management*, 13(1), pp.49-70.
Berger, A.N. and Bouwman, C.H., 2017. Bank liquidity creation, monetary policy, and financial crises. *Journal of Financial Stability*, 30, pp.139-155.
Berger, A.N., 1995. The relationship between capital and earnings in banking. *Journal of money, credit and Banking*, 27(2), pp.432-456.
Berger, A.N., Hanweck, G.A. and Humphrey, D.B., 1987. Competitive viability in banking: Scale, scope, and product mix economies. *Journal of monetary economics*, 20(3), pp.501-520.
Bitar, M., Pukthuanthong, K. and Walker, T., 2018. The effect of capital ratios on the risk, efficiency and profitability of banks: Evidence from OECD countries. *Journal of International Financial Markets, Institutions and Money*, 53, pp.227-262.
Bourke, P., 1989. Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking & Finance*, 13(1), pp.65-79.
Bikker, J.A. and Hu, H., 2002. Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. *PSL Quarterly Review*, 55(221).
Brewer III, E. and Lee, C.F., 1986. How the market judges bank risk. Federal Reserve Bank of Chicago Economic Perspectives, 10(6), pp.25-31.
Bikker, J.A. and Hu, H., 2002. Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. *PSL Quarterly Review*, 55(221).
Brown, C.O. and Dinç, I.S., 2011. Too many to fail? Evidence of regulatory forbearance when the banking sector is weak. *The Review of Financial Studies,* 24(4), pp.1378-1405.
Calomiris, C.W. and Mason, J.R., 2003. Consequences of bank distress during the Great Depression. *American Economic Review*, 93(3), pp.937-947.
Chortareas, G.E., Girardone, C. and Ventouri, A., 2012. Bank supervision, regulation, and efficiency: Evidence from the European Union. *Journal of Financial Stability*, 8(4), pp.292-302.
Demirgüç-Kunt, A. and Huizinga, H., 1999. Determinants of commercial bank interest margins and profitability: some international evidence. *The World Bank Economic Review*, 13(2), pp.379-408.
De Guevara, J.F., Maudos, J. and Pérez, F., 2007. Integration and competition in the European financial markets. *Journal of International Money and Finance*, 26(1), pp.26-45.
Demirguc-Kunt, A., Detragiache, E. and Merrouche, O., 2013. Bank capital: Lessons from the financial crisis. *Journal of Money, Credit and Banking*, 45(6), pp.1147-1164.
Diamond, D.W. and Rajan, R.G., 2000. A theory of bank capital. *The Journal of Finance,* 55(6), pp.2431-2465.
Dietrich, A. and Wanzenried, G., 2011. Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), pp.307-327.
Faccio, M., Masulis, R.W. and McConnell, J.J., 2006. Political connections and corporate bailouts. *The Journal of Finance*, 61(6), pp.2597-2635.
Fiordelisi, F., Marques-Ibanez, D. and Molyneux, P., 2011. Efficiency and risk in European banking. *Journal of Banking & Finance*, 35(5), pp.1315-1326.
Goddard, J., Molyneux, P. and Wilson, J.O., 2004. The profitability of European banks: a cross-sectional and dynamic panel analysis. *The Manchester School,* 72(3), pp.363-381.
Golin, J. and Delhaise, P., 2013. The bank credit analysis handbook: a guide for analysts, bankers and investors. John Wiley & Sons.
Iannotta, G., Nocera, G. and Sironi, A., 2007. Ownership structure, risk and performance in the European banking industry. *Journal of Banking & Finance*, 31(7), pp.2127-2149.
Jahankhani, A. and Lynge, M.J., 1979. Commercial bank financial policies and their impact on market-determined measures of risk/BEBR No. 556. Faculty working papers; no. 556.
Kennedy, P., A guide to econometrics. 2008. Malden, MA: Blackwell.
Kim, M., Kristiansen, E.G. and Vale, B., 2005. Endogenous product differentiation in credit markets: What do borrowers pay for? *Journal of Banking & Finance*, 29(3), pp.681-699.
Mayne, L.S., 1972. Supervisory influence on bank capital. *The Journal of Finance*, 27(3), pp.637-651.
Mehran, H. and Thakor, A., 2011. Bank capital and value in the cross-section. *The Review of Financial Studies*, 24(4), pp.1019-1067.
Modigliani, F. and Miller, M.H., 1963. Corporate income taxes and the cost of capital: a correction. *The American economic review*, 53(3), pp.433-443.
Molyneux, P. and Thornton, J., 1992. Determinants of European bank profitability: A note. *Journal of banking & Finance*, 16(6), pp.1173-1178.
Micco, A., Panizza, U. and Yanez, M., 2007. Bank ownership and performance. Does politics matter? *Journal of Banking & Finance*, 31(1), pp.219-241.
Lee, C.C. and Hsieh, M.F., 2013. The impact of bank capital on profitability and risk in Asian banking. *Journal of international money and finance*, 32, pp.251-281.

Pasiouras, F. and Kosmidou, K., 2007. Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research in International Business and Finance*, 21(2), pp.222-237.
Perry, P., 1992. Do banks gain or lose from inflation? *Journal of Retail Banking*, 14(2), pp.25-31.
Revell, J., 1979. Inflation & Financial Institutions. Financial Times Limited.
Rime, B., 2001. Capital requirements and bank behaviour: Empirical evidence for Switzerland. *Journal of Banking & Finance*, 25(4), pp.789-805.
Pettway, R.H., 1976. Market tests of capital adequacy of large commercial banks. *The Journal of Finance*, 31(3), pp.865-875.
Shrieves, R.E. and Dahl, D., 1992. The relationship between risk and capital in commercial banks. *Journal of Banking & Finance*, 16(2), pp.439-457.
Short, B.K., 1979. The relation between commercial bank profit rates and banking concentration in Canada, Western Europe, and Japan. *Journal of Banking & Finance*, 3(3), pp.209-219.
Slovin, M.B., Johnson, S.A. and Glascock, J.L., 1992. Firm size and the information content of bank loan announcements. *Journal of Banking & Finance,* 16(6), pp.1057-1071.
Smirlock, M., 1985. Evidence on the (non) relationship between concentration and profitability in banking. *Journal of money, credit and Banking*, 17(1), pp.69-83.
Stiroh, K.J. and Rumble, A., 2006. The dark side of diversification: The case of US financial holding companies. *Journal of banking & finance*, 30(8), pp.2131-2161.
Staub, R.B., e Souza, G.D.S. and Tabak, B.M., 2010. Evolution of bank efficiency in Brazil: A DEA approach. *European journal of operational research*, 202(1), pp.204-213.
Sufian, F., 2010. The impact of risk on technical and scale efficiency: empirical evidence from the China banking sector. *International Journal of Business Performance Management*, 12(1), pp.37-71.
Tan, Y. and Floros, C., 2012. Bank profitability and inflation: the case of China. *Journal of Economic Studies*, 39(6), pp.675-696.
Tan, Y., 2016. The impacts of risk and competition on bank profitability in China. *Journal of International Financial Markets, Institutions and Money*, 40, pp.85-110.
Vu, H. and Nahm, D., 2013. The determinants of profit efficiency of banks in Vietnam. *Journal of the Asia Pacific Economy*, 18(4), pp.615-631.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 396-404
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.95

Globalization and Capital Market Development in Nigeria

Samson Olusegun Akinwale[1], Oludayo Elijah Adekunle [2]

[1] Department of Banking and Finance, Adekunle Ajasin University Akungba-Akoko, Ondo State, Nigeria

Correspondence: Adekunle Oludayo Elijah, Department of Banking and Finance, Adekunle Ajasin University Akungba-Akoko, Ondo State, Nigeria. adekunleoludayo864@yahoo.com

Abstract
The Nigerian capital market has undergone different phases coupled with diverse challenges which impeded the growth of the market and its integration into the world financial market. This study investigated the effect of globalization on the capital market in Nigeria from 1986 to 2017 using secondary data from the Central Bank of Nigeria Statistical Bulletin. Augmented Dickey – Fuller (ADF), Bound Test and Autoregressive Distributed Lag were employed to evaluate the effect of trade openness, foreign direct investment, and foreign portfolio investment on market capitalization in Nigeria. The results of the unit root test revealed that both trade openness and market capitalization were stationary at first difference while foreign direct investment and foreign portfolio investment were stationary at level. Also, the long-run equilibrium relationship was found among the variables based. The ARDL revealed that both trade openness and foreign portfolio investment had a positive and significant effect on market capitalization both in short run and long run while foreign direct investment had a negative and insignificant effect on market capitalization in short run and long run. In line with findings, it was concluded that globalization had a significant effect on the economy through openness and the inflow of foreign capital. The study recommended that there is a need for total liberalization of the economy in order to reap the full benefits of globalization in the economy. The government should formulate a policy that will reduce or discourage the expatriation of profit by foreign investors to foreign countries. Finally, innovative financial instruments should be introduced in the market for the purpose of attracting foreign investors.

Keywords: Capital Market, Foreign Portfolio Investment, Foreign Direct Investment, Globalization, Trade Openness

JEL Classifications: F21, F62, G23

1. INTRODUCTION

The linkage between the local financial system and the world financial system has continued to increase in recent years. This is as a result of the increasing interdependency among nations of the world which result from globalization. Jeelani, Mukhopadhyay, and Vashishtha (2013) asserted that reforms of the 1990s bring about linkages between national financial market and global financial system through capital and financial assets mobility across the border.

In recent years, the need to complement low savings in the economy with international capital has led developing countries to open their financial markets to global markets. This is evidence in the growth of capital flows into developing countries over the last decades through globalization (Guido & Adriana, 2001; Adeniran, Adeyemo & Alade, 2015). Obadan (1999) opined that globalization had encouraged not only the flow of goods and services but also the mobility of capital among nations.

Capital market plays a significant role in promoting growth and development through the effective intermediation of funds among economic agents (Faloye & Adekunle, 2016). However, the ability of the capital market to stimulate growth and development is anchor upon its capacity and effectiveness to channel and intermediate idle resources among different agents in the economy by offering diverse financial instruments that will meet the investment needs of investors in the economy (Nwadike & Nwibo, 2014).

Furthermore, the capital market must be able to attract funds from global financial markets into the domestic economy in order to complement insufficient domestic financial resources through the integration of the market into the global financial network. Globalization of the capital market involves the integration of the domestic capital market into world financial markets through the formulation of policies that will enhance the competitiveness and ability of the market to attract foreign financial investment.

The Nigerian capital market has undergone different phases coupled with diverse challenges that have impeded the growth of the market. Apart from the social and institutional factors which hindered the growth of the capital market, complex factors such as political instability, policy barriers to capital flows, poor infrastructural facilities, corruption, inappropriate economic policies instabilities, lack of advance and attractive financial assets retard the ability of the capital market to compete globally and attract foreign resources into the economy for promoting productive and real sector development (Nwadike & Inwibo, 2014; Oluwole, 2014).

The direction of the relationship between globalization and capital market development has received little attention from scholars' (See Goel & Gupta, 2011; Jeelani *et al.,* 2013; Pocius *et al.,* 2014). In Nigeria, there is a dearth of literature on the effect of globalization on capital market development. Though, the study of Oluwole (2014); Nwadike and Nwibo (2014); Adeniran *et al.,* (2015) examined the effect of globalization on the Nigeria capital market, however, there is conflicting view on the relationship between globalization and capital market in Nigeria. Oluwole (2014) found a positive relationship between globalization and capital market while the result of Adeniran *et al.,* (2015) indicated that globalization had a negative effect on the capital market in Nigeria. This has generated controversy as to the relationship between globalization and capital market, which calls for further study.

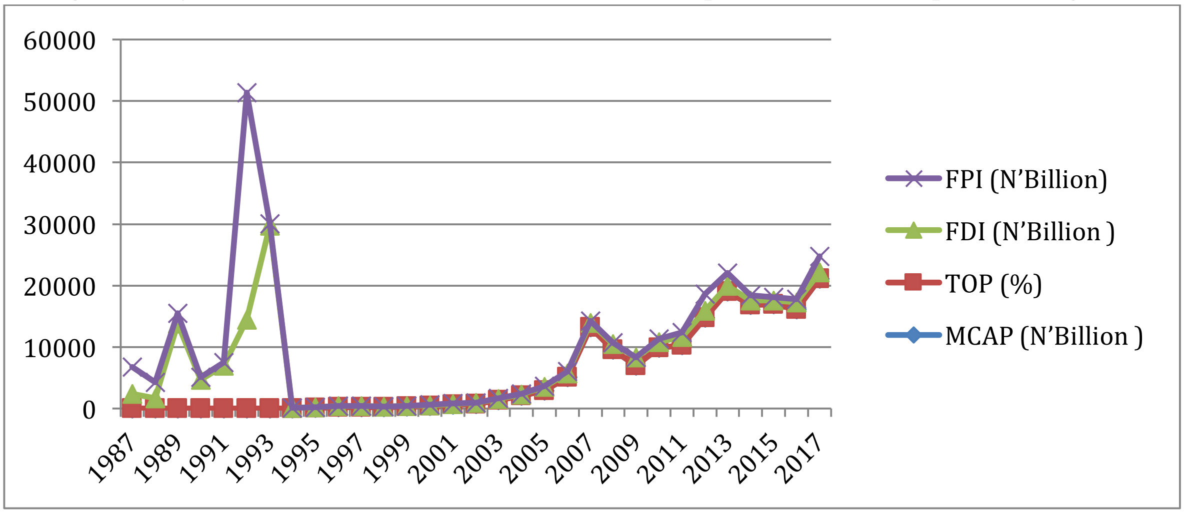
Furthermore, this study advanced on existing literature by assessing the short run and long-run impact of globalization on capital market development in Nigeria by capturing important globalization variables like foreign portfolio investment, foreign direct investment and trade openness. Finally, the direction of causality between globalization and the capital market was not investigated in previous studies. This is of necessity as the direction of causality between globalization and capital market development will inform policies on whether globalization stimulates the capital market and vice versa or causality flows from both variables to another. The rest of this paper is spread into four sections, which include literature review, methodology, interpretation of empirical results, and finally, conclusion and recommendations.

2. LITERATURE REVIEW

Globalization enables the creation of a coherent economy through the integration of the work market and financial system. According to Oluwole (2014), globalization involves increasing economic interdependence among countries through the expansion of cross-border trading of goods and services, the flow of international financial resources and rapid diffusion of technology. The globalization of capital market creates an avenue for the linkage of domestic capital market with the world market. Through the integration of domestic financial market to the world financial market, domestic capital will be able to attract the inflow of capital from international economy through investment in the domestic market by the purchase of domestic financial assets by foreign investors.

Capital market globalization is necessitated by the financial need of real sector of the economy which cannot be met domestically due to shortage domestic resources and the opportunities created by global financial markets through rapid technological improvement which supports securities trading and investment among countries (Goel & Gupta, 2011). Thus, globalization of the capital market stimulates industrial development and wealth creation through the inflow of foreign capital by investing in domestic assets by foreign investors, thereby contributing to growth and development.

Figure 1: Stylized Fact on Globalization Variables and Capital Market Development in Nigeria



Sources: Central Bank of Nigeria Statistical Bulletin, 2017

Figure 1 shows the graphical presentation of selected globalization variables and market capitulation in Nigeria. It is indicated in the graph that at the initial stage, foreign direct investment and foreign portfolio investment trend upward but fall and become stabilized at the later stage. This indicated that the Nigerian economy has been experiencing the inflow of foreign direct investment and foreign portfolio investment, which is largely due to the level of openness and liberalization of the economy. However, the graph shows that the level of openness in the economy was downward trending before rising in the later stage showing more openness in the economy in terms of trade relationship with other nations of the world. In conclusion, this graph above shows that the economy has been able to link with other nations of the world through globalization via policies framework and strategy that promote economic integration and interrelation.

Goel and Gupta (2011) examined the impact of globalisation on stock market development in India using descriptive and OLS technique. It was indicated that market capitalisation ratio, value traded ratio, and turnover ratio, and volatility ratio had positive and significant stock markets of India. El-Nader and Alraimony (2012) looked at the impact of macroeconomic factors on Amman stock market returns employing monthly data between from 1991 to 2010. The study employed six macroeconomic factors: Real money supply (RMS2), real gross domestic product (RGDP), consumer price index (CPI), real exchange rate (E1), weighted average interest rates on loans and advances (WAIR), and a dummy variable (DUM) which were analyzed using OLS, ARCH GARCH. The estimated result showed that RMS2, CPI, E1, WAIR, and the Dummy Variable had a negative role on the ASE returns.

In Nigeria, Inwidike and Inwibo (2014) explored the effect of globalization on the stock exchange and economic growth from 1981 to 2011 by employing ADF and PP unit root test, and co-integration test in testing and analysis of data. The result of the analysis showed that trade openness, the total inflow of capital, and the net flow of capital had a positive effect on total market capitalization in Nigeria. Ishmael *et al.,* (2014) examined the impact of globalization on Nigeria's capital market operations using historical and primary data obtained from Lagos stock exchange, Central Bank of Nigeria (CBN) and the Securities and Exchange Commission through structured interview and questionnaires. It was found that the capital market has been repositioned tentatively to achieve its objectives as an engine of growth and economic development through globalization.

Oluwole (2014) examined the interrelationship between globalization and stock market growth using secondary data which were analyzed with ordinary least square simple regression model, and it was found that trade liberalization and financial integration had a significant impact on the growth of Nigerian stock market. Adeddiran, *et al.,* (2015) investigated the relationship between globalization, capital market, and economic growth in Nigeria. The study employed an ordinary least square to establish the relationship between globalization, consumer price index, and gross domestic product. It was revealed that globalization measured by the ratio of total trade to the gross domestic product had negative and significance on the gross domestic product while the consumer price index had a positive and insignificant effect on gross domestic product.

The effect of the global financial crisis on the Nigerian stock market was carried out by Onuoha and Nwaiwu (2016) using secondary data and analyzed using regression model. The study revealed that global financial crisis measured by the currency crisis, credit crisis, liquidity crisis, and foreign investment crisis had a negative and significant impact on the Nigerian stock market. Using the framework of exchange rate; four regional equity markets returns which were analyzed using Autoregressive Distributed Lag (ARDL) method and vector error correction model, Tomaliwan (2016) assessed the impact of domestic macroeconomic factors on the Philippine stock market behavior adopting monthly data from January 2006 to December 2013 by using four macroeconomic variables namely industrial production index, money supply, short term interest rate. It was reported in the study that there is co-integration between the Philippine stock market and the aforementioned factors which meant a long-run equilibrium relationship existed.

Akinmulegun (2018) examined the relationship between capital market development and foreign portfolio investment in Nigeria from 1985 to 2016. The study employed secondary data sourced from the Central Bank of Nigeria Statistical Bulletin and publications of Nigeria Stock Exchange. Augmented Dickey Fuller Test, Granger Causality Test, and Vector Error Correction Model were employed to conduct the analysis. The study concluded that capital market development has a significant effect on foreign portfolio investment in Nigeria.

3. METHODOLOGY

The data for this study was quantitative and secondary in nature. It covered the period of 1986 to 2017. Data were obtained from the Central Bank of Nigeria Statistical Bulletin (2017). The study adopted historical, or after the fact research design to evaluate the effect of the globalization variables measured as trade openness, foreign direct investment, and foreign investment on capital market development measured market capitalization.

3.1 Model Specification

The model for this study was anchored upon modify the model of Oluwole (2014). However, the variables adopted in the study were based on the empirical work of Nwadike and Nwibo (2014); Akinmulegun (2018). The model was structured to examine the effect of trade openness, foreign direct investment, and foreign portfolio investment on market capitalization, which is given as:

$$MACP = f(TOP, FDI, FPI) \quad 1$$
$$LOG(MCAP_t) = \beta_0 + \beta_1 LOG(TOP_t) + \beta_2 LOG(FDIt) + \beta_3 LOG(FPI_{t)} + e_t \quad 2$$

Where: MCAP = Market Capitalization. TOP = Trade Openness. FDI = Foreign Direct Investment. FPI = Foreign Portfolio Investment. $\beta_{0\,=}$ Constant. B_1- β_3 = Coefficient of the parameters. e = Error Term

3.2 Analytical Framework

In time series analysis, there is a tendency of obtaining spurious result if data series are non stationary. Thus, the assessment of stationary of data becomes necessary in econometric analysis. For this purpose, the study employed Augmented-Dick-Fuller (ADF) unit root technique to determine the stationarity and order of integration of the variables in order to avoid the problem of spurious regression, and it was indicated the variables are a mixture of level and first difference integration which necessitated the adoption of ARDL-Bound technique.

The existence of long run relationship among the variables was ascertained using Bound Test technique. ARDL Bound testing approach takes the following equation:

$$D(LOG(MCAP_t)) = \alpha_{01} + \beta_1 LOG(MCAP_{t-1}) + \beta_2 LOG(FDI_{t-1}) + \beta_3 LOG(FPI_{t-1}) + \beta_4 LOG(TOP_{t-1}) + \sum_{i=1}^{q} \alpha 1 LOG(MCAP_{t-1}) + \sum_{i=1}^{q} \alpha 2 LOG(FDI_{t-1}) + \sum_{i=1}^{q} \alpha 3 LOG(FPI_{t-1}) + \sum_{i=1}^{q} \alpha LOG(4TOP_{t-1}) + \varepsilon_{1t} \quad 3$$

Where MCAP, FDI, FPD, and TOP are variables of the study, D is the first difference, and ε is error term. The F-statistic was compared against the critical value at 5% for interpretation while the null hypostasis of no co-integration was tested against the alternate hypothesis of co-integration.

An Autoregressive Distributed Lag was employed to establish the long-run-short-run dynamics effect of trade openness, foreign direct investment, foreign portfolio investment on market capitalization in order take care of the spurious nature of the time series data in the traditional OLS. The ARDL approach is also suitable where varaibles are stationary at either first difference or combination of level and first difference and applicable to small sample size. The long run and short run equation of the ARDL is given respectively as:

$$MCAP_t = \alpha_{01} + \sum^{p}{}_{i=I}\Theta_1 LOG(FDI_{t-1}) + \sum^{p}{}_{i=I}\Theta_2 LOG(FPI_{t-1}) + \sum^{p}{}_{i=I}\Theta_3 LOG(TOP_{t-1}) + e_t \quad 4$$

$$MCAP_t = \alpha_0 + \sum^{p}{}_{i=I}\lambda_1 \Delta LOG(MCAP_{t-1}) + \sum^{p}{}_{i=I}\lambda_2 \Delta\, LOG(FDI_{t-1}) + \sum^{p}{}_{i=I}\, \lambda_3 \Delta(LOGFPI_{t-1}) + \sum^{p}{}_{i=I}\, \lambda_4 \Delta\, LOG(TOP_{t-1}) + \phi ECT_{t-1} + \mu_t \quad 5$$

Furthermore, the study employed Pairwise Granger Causality in order to establish the direction of causality among the variables. Finally, in order to test the reliability and robustness of the regression results, the study adopts various diagnostics test which includes, Normality test, Serial Correlation Lagrange Multiplier Test, Breauch Pagan test for Heteroscdacity and Ramsey Reset Test.

4. INTERPRETATION OF RESULTS

4.1 Stationarity Test

Table 1: Summary of Unit Root at Level

VARIABLES	TEST STATISTIC	5% CRITICAL VALUE	Prob.	LEVEL	S/NS
MCAP	/0.461437/	/2.960411/	0.9824	1(0)	NS
TOP	/2.019712/	/2.960411/	0.2773	1(0)	NS
FDI	/3.632634/	/2.960411/	0.0107	1(0)	S
FPI	/5.812347/	/2.960411/	0.0000	1(0)	S

Source: Researchers' Computation, 2019

Table 1 presents the stationarity test for the series of the variables at a level using the Augmented Dickey Fuller Test. The result indicates that both trade openness and market capitalization are not stationary at the level since their respective t-statistics are less than the critical value given probability values of 0.9824 and 0.2773, respectively. However, both foreign direct investment and foreign portfolio investment are stationary at the level given that their respective t-statistics are less than the critical value with probability values of 0.0107 and 0.0000, respectively. Thus, the null hypothesis of unit root is accepted for both trade openness and market capitalization but rejected for both foreign direct investment and foreign portfolio investment at the level.

Table 2: Summary of Unit Root at First Difference

VARIABLES	TEST STATISTIC	5% CRITICAL VALUE	Prob.	LEVEL	S/NS
MCAP	/5.335851/	/2.963972/	0.0001	1(1)	S
TOP	/7.041256/	/2.963972/	0.0000	1(1)	S

Source: Researchers' Computation, 2019

Table 2 shows the stationarity test for trade openness and market capitalization first difference, and it reveals that trade openness and market capitalization are free from unit root tangle at the level since their respective t-statistics are greater than the critical value at 5% level of significance in an absolute term as shown in the table. Hence, the null hypothesis of the unit root was therefore rejected for the entire variables.

4.2 Bound Long Run Relationship

Table 3: Bound Test

Test Statistic	**Value**	**K**
F-statistic	11.67390	3
Critical Value Bounds		
Significance	**I0 Bound**	**I1 Bound**
10%	2.01	3.1
5%	2.45	3.63
2.5%	2.87	4.16
1%	3.42	4.84

Source: Researchers' Computation, 2019

The result of the long run association-ship among the macroeconomic variables using the bound test is presented in table 3. In order to reject the null hypotheses of no long-run relationship, the F-statistics must be greater than the upper bound (I1) at 5% level of significance. The table reveals that F-statistic is given as 11.67390 while the critical value at 5% is given 2.45 with an indication that the F-statistic is greater than the critical value at 5% significance level. Thus, it is concluded that there is the long-run relationship among the macroeconomic variables denoting the rejection of the null hypothesis of no long-run relationship existing between market capitalization, trade openness, foreign direct investment, and foreign portfolio investment

4.3 Interpretation of ARDL Short and Long Run Coefficient

Table 4: Short Run Coefficient (Cointegrating Form)

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
DLOG(TOP)	0.581912	0.174885	2.611981	0.0226**
DLOG(TOP(-1))	0.447246	0.064358	3.734115	0.0014**
DLOG(FDI)	-0.076583	0.055642	-1.376373	0.1839
DLOG(FDI(-1))	-0.123105	0.045506	-2.705258	0.0136**
DLOG(FPI)	0.557740	0.049391	2.169023	0.0061**
DLOG(FPI(-1))	0.226766	0.034659	2.772273	0.0090**
CointEq(-1)	-0.234413	0.026020	-3.322539	0.0009**

Source: Researchers' Computation, 2019

Table 4 shows the result of the short run Autoregressive Distributed Lag result. The co-integration equation reveals a negative, which is significant at 5%, indicating that there is a speed of adjustment in the regression model in the short run. The co-integration equation has a coefficient of -0.234413 with a probability value of 0.0009, implying that there is a tendency for market capitalization to correct itself against disequilibrium at 23% in the short run.

Furthermore, the result indicates that trade openness had a positive and significant effect on market capitalization in the short run which implies that 1% increase in trade openness will lead to increase in market capitalization which is in line with the theoretical expectation.

Also, foreign direct investment had a negative and insignificant effect on market capitalization which implies that 1% increase in foreign direct investment will lead fall in market capitalization in the short run which does not conform with the theoretical expectation

Finally, the short run result indicated that foreign portfolio investment exerted a positive and significant effect on market capitalization which implies that a 1 % increase in foreign portfolio investment will lead to an increase in market capitalization.

Table 5: Long Run Coefficient

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(TOP)	0.818679	3.529290	2.807523	0.0057
LOG(FDI)	-0.602273	1.926355	-0.831764	0.4154
LOG(FPI)	0.804567	0.010680	2.796065	0.0353

Source: Researchers' Computation, 2019

Table 5 presents the result of the long run relationship between market capitalization, trade openness, foreign direct investment, and foreign portfolio investment. The result revealed that trade openness had a coefficient of 0.818679 which implies that a 1% increase in trade openness will lead to 81% increase in market capitalization which is in conformity of the a priori expectation.

However, the negative and insignificant relationship was established between market capitalization and foreign direct investment with a coefficient of -0.602273 which implies that 1% rise in foreign direct investment will lead to 60% fall between market capitalization which goes against the theoretical expectation.

Finally, foreign portfolio investment had a positive and significant effect on market capitalization in the long run with a coefficient of 0.804567 which implies that 1% increase in foreign portfolio investment will lead to 80% increase in market capitalization.

4.4 Post Test Techniques

Table 6: Diagnostics Results

Diagnostics test	Observed value	P-value (Chi-square)
Normality Test	0.258056	0.87895
Breusch-Godfrey LM test for autocorrelation	3.743165	0.1539
Heteroskedasticity Test: Breusch-Pagan-Godfrey	10.31331	0.4134
Ramsey Reset Test	0.543643	0.4699

Source: Researchers' Computation, 2019

Table 6 shows the diagnostics test for the regression result. As revealed in the table, the residual of the model is normally distributed with a p-value of 0.87895. Also, the residual is not serially correlated with a p-value of 0.1539, which is greater that the critical value of 0.05. In the same vein, the residual of the model is not characterized with the problem of Heteroskedasticity give a p-value of 0.4134, which is greater that the critical value of 0.05. Finally, the Ramsey Reset Test indicates that there is no misspecification in the regression model give a p-value of 0.4699.

4.5 Granger Causality Test

Table 7: Pairwise Granger Result

Null Hypothesis:	Obs	F-Statistic	Prob.	Result
TOP does not Granger Cause MCAP MCAP does not Granger Cause TOP	30	0.22418 4.33374	0.8008 0.0242	Unidirectional Relationship
FDI does not Granger Cause MCAP MCAP does not Granger Cause FDI	30	0.12768 0.32602	0.8807 0.7248	Independent Relationship
FPI does not Granger Cause MCAP MCAP does not Granger Cause FPI	30	0.10238 0.13574	0.9031 0.8737	Independent Relationship

Source: Researchers' Computation, 2019

Table 7 presents the result of the granger causality between trade openness, foreign direct investment, foreign portfolio investment, and market capitalization. It is revealed that there is a unidirectional relationship between trade openness and market capitalization without causality running from trade openness to market capitalization, which implies that trade openness does not granger cause market capitalization. Also, the independent relationship is established between foreign direct investment and market capitalization, which indicates that foreign direct investment does not granger cause market capitalization. Finally, the results indicate that there are independent relationship foreign portfolio investment and market capitalization, indicating that foreign portfolio investment does not granger cause market capitalization.

5. CONCLUSION AND RECOMMENDATIONS

The role of the capital market in facilitating sustainable growth and development through the provision of long term funds for business activities cannot be underestimated. The capital market serves as an important mechanism for effective and efficient mobilization and allocation of savings, which is crucial for the growth of the economy. In recent years, the wave of globalization has affected almost every sector, including the financial market. Globalization of the capital market involves the integration of the domestic capital market with world financial market for effective intermediation process. It promotes the attractiveness of international capital from foreign markets, which increase the availability of financial resources for domestic investments.

The study found that that the level of openness of the economy and foreign capital produced a significantly positive effect on capital market performance while foreign direct investment had an undesirable effect on the capital market. The study thus concluded that globalization has a significant effect on the economy through openness and the inflow of foreign capital through investment domestic financial assets by foreign investors.

Based on the foregoing, it was recommended that total liberalization of the economy should be embarked upon by the government in order to reap the full benefits of globalization in the economy. The government should formulate a policy that will reduce or discourage the expatriation of profit by foreign investors to foreign countries. The global stock market standard should be adopted in order to integrate the Nigerian capital market into world financial market and finally, more innovative financial instruments should be introduced in the market for the purpose of attracting foreign investors.

References

Adeniran, O.A, Adeyemo, K.S. & Alade, S. (2015). Globalization, capital market, and economic development in Nigeria. *Journal of Governance and Regulation, 4*(1), 57-62

Akinmulegun, S.O. (2018). Capital market development and foreign portfolio investment inflow in Nigeria (1985-2016). *Advances in Economics and Business, 6*(5), 299-307.

El-Nader, H.M. & Alraimony, A.D. (2012). The impact of macroeconomic factors on Amman stock market returns. *International Journal of Economics and Finance, 4*(12), 202-213.

Faloye B.A. & Adekunle, O.E. (2016). The impact of capital market on economic growth of Nigeria. *Nigeria Journal of Banking, Finance and Entrepreneurship Management, 2*, 104 – 116.

Goel, K. & Gupta, R. (2011). Impact of globalization on stock market development in India. *Delhi Business Review*, *12*(1)*,* 68-84

Guido B. & Adriana, A. (2001). Globalization and the role of the state: challenges and perspectives. United Nations World Public Sector Report.

Jeelani, F., Mukhopadhyay, D. & Vashishtha, A. (2013). Globalization and the Indian capital market. *International Journal of Management and Social Sciences Research* 2(8), 167-174.

Nwadike, G.C. & Nwibo, S.E. (2014). Effect of globalization on Nigeria stock exchange and capital market liberation on economic growth (1981 – 2011). *Journal of Business, Economics & Finance, 3*(3), 357-370.

Obadan, M. I. (1999). Managing the Nigerian economy into the next millennium: Strategies and policies. *Journal of Economic Management, 5*(1), 1-38.

Oluwole, F.O. (2014). Globalization and stock market growth in Nigeria. *European Scientific Journal, 10*(31), 317-332.

Onuoha, T.E. & Nwaiwu, J.N. (2016). Impact of global financial crisis on Nigerian stock market. *An International Multidisciplinary Journal, 10*(1), 166-177

Pocious, V., Stungurienė, S. & Paškevičius, A. (2014). The factors of the attractiveness of the capital market of Lithuania. *Procedia - Social and Behavioral Sciences 110*, 1052 – 1062

Tomaliwan, M.F.D. (2016). Does the Philippine stock market respond to domestic economic fundamentals and regional equities markets? An ARDL bound testing approach. *Presented at the DLSU Research Congress, 4,* 7-9.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 405-417
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.96

What Drives Government Security Yields in Developing Countries? Evidence from the Countries in the West African Economic and Monetary Union (WAEMU)

Issoufou Soumaila[1]

[1] University Arts and Sciences, Northern Lights College, Fort St John, Canada

Correspondence: Issoufou Soumaila, University Arts and Sciences, Northern Lights College, Box 1000, 9820-120 Avenue, Fort St John, British Columbia, V1J 6K1 Canada. Tel: 250-785-6981 -E-mail: isoumaila@nlc.bc.ca

Abstract
The purpose of this study is to analyze the determinants of government security yields in relation to the recent development of WAEMU government securities market. The determinants are grouped into three categories of factors; namely macroeconomic factors, microstructure factors, and the external factors. The results show that economic growth rate, as well as countries capacity to effectively organize government securities issuances, are the main drivers of government securities yields. The policy implication of the study is that WAEMU countries should monitor their economic performance and implement structural reforms in order to maintain sustained economic growth.

Keywords: Sovereign Debt Market, Government Bond Yields, Fiscal Policy, WAEMU

1. Introduction

To finance their ambitious public investment projects in infrastructure, WAEMU member states have used extensively sovereign debt market by issuing government securities[1]. In recent years, the regional securities market has become the main source of internal financing for WAEMU countries. In 2017, these countries raised 2 644 billion FCFA (approximately 4.5 billion USD).

Although they belong to the same Economic and Monetary Union, the government securities yields differ from one country to another. For instance, during the period of 2013-2014, the weighted average interest rate on a twelve months Treasury bonds varies from 4.477% (in Mali) to 6.084% (in Guinea-Bissau). This interest rate differential could mean that investors do not have the same perception of risk in all WAEMU countries. However, there seems to be some convergence in recent month as the cost of one-year government securities in the region fluctuate between 6% and 6.15% in the last quarter of 2018.

[1] In WAEMU, government securities are essentially composed of Treasury bills (bonds) with a maturity of at 0 to 24 months and bonds (obligations) with a maturity of more than 24 years.

Beyond investor's perception, several factors could impact government securities interest rates. Indeed, studies (Gale and Orszag, 2002, Engen and Hubbard, 2004; Edwards, 1986; Zigman and Cota, 2011) showed that the budget deficit, inflation, the degree of openness of the economy and global liquidity significantly determine government securities interest rate. Very few studies (Diouf and Boutin-Dufresne, 2012; Hitaj and Onder, 2013) focused on the determinants of government securities yields in WAEMU Countries. These studies highlighted the relationship that may exist between the yield and a number of macroeconomic variables. However, these authors fail to take into account the microstructure of the WAEMU securities market and the international financial environment in their analysis. In addition, these studies were completed when the government securities market was still at its embryonic stage. Since then a Regional Agency in Support of the Issuance and Management of Public Securities in the WAMU (Agence UMOA-titres[2]) was created. The agency has contributed to the development of the securities market by reducing transaction costs.

The purpose of this study is to analyze the determinants of government securities yields in relation to the recent development of WAEMU sovereign debt market. Specifically, the study seeks to answer the following questions. What are the macroeconomic variables that significantly influence government securities yields? Can the investors' perception explain the variations in the yield? Is there any relationship between the yield and the global economic environment, including global liquidity?

The rest of the study is organized according to the outline below. The next section goes over the determinant of government securities yields. Section III presents a description of the data and methodology used. Section IV analyses the empirical results. Finally, section V concludes the study with some policy recommendations.

2. WAEMU government security market

2.1 Institutional framework

WAEMU zone is currently composed of eight countries, including Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo. WAEMU treaty went into effect in 1996 to complete the economic and monetary integration and with the main objective being the macroeconomics and fiscal convergence of member countries. The treaty also aims to improve the competitiveness of its members by ensuring free movement of goods and services as well as factors production. Interestingly, the integration process of the region started with the West African Monetary Union (WAMU), which was established in 1962 after the independence of former French colonies in West Africa. The WAMU treaty which was modified in 1973 gave the Central Bank of West African countries (BCEAO) full authority to conduct monetary policy.

WAEMU countries share a common currency, named: *franc de la Communauté Financière Africaine (FCFA)*. The FCFA is pegged to the euro, which means the region adopt a fixed exchange regime. Currently, 1 Euro is equivalent to 655.96 FCFA. The framework to ensure the convertibility of FCFA into Euro is rather unusual. Based on UMOA treaty, the French treasury in charge of maintaining the fixed exchange between Euro and FCFA. In return, WAEMU countries must keep 50% of their foreign exchange reserves at the French treasury. The reserve is kept in an account and earn 0.75% interest. That means BCEAO doesn't directly intervene in the foreign exchange market to maintain the fixed exchange rate. The only time the FCFA was devaluated was in 1994 with the aim of increasing the UMOA competitiveness.

2.2 WAEMU government securities market

The WAEMU government securities market more precisely, the T-bills market was created in 1996 to create a condition for greater domestic or regional resources mobilization. The second objective for developing the market had to do with the open-market operation for a more effective monetary policy. However, the results were disappointing as the WAEMU countries were reluctant to use the market to raise the much need resources for their development. For instance, from 1996 to 2000, only 51,9 billion FCFA was raised in the securities market. The

[2] One of the missions of Agence UMOA-Titres is to not only provide assistance to member states in their financing operations on the financial markets, but also to assist them with the organization of securities issues on the local market under optimal conditions of safety and success for all market stakeholders.

poor performance of the market is because WAEMU countries continued to use the direct assistance from the BCEAO. Indeed, countries had the option of getting monetary advances (statutory advances) of up to 20% of their last year tax revenue from the central bank according to the criteria set in article 16 of the BCEAO Statutes. Countries found it convenient to raise fund using this type of financing than going through the hustle of issuant T-bills. From 264.7 billion FCFA in 1990, the statutory advances increased to 361.6 billion of FCFA in 1998.

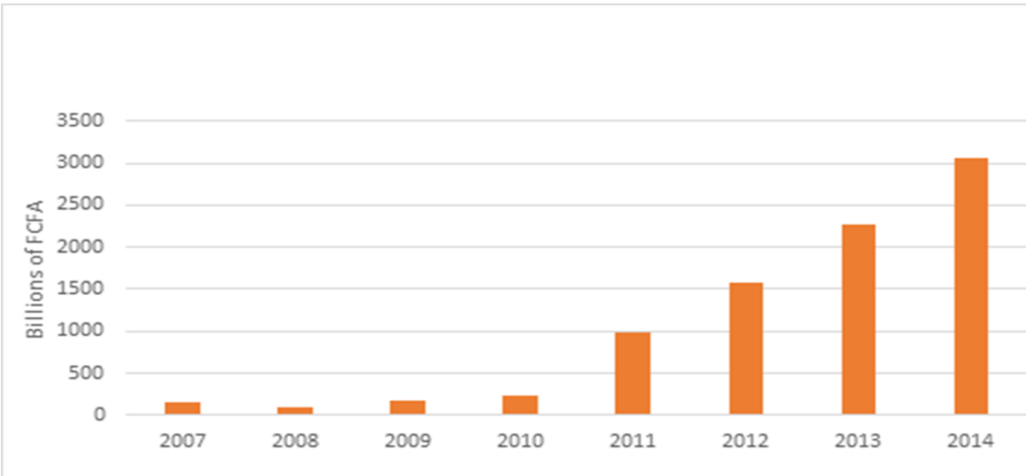
There is only one problem with statutory advances in that it is a source of money creation, and the central bank has limited control over it. For that reason, the Central Bank decided to phase out the use of statutory advances by 2001 and started a vast reform of the securities market in 1999. The objectives of this reform are threefold. First, the goal is to modernize the management of sovereign debt. Second, it aimed to create more investment opportunities to savers and investors in the region. Finally, it would allow the Central Bank to obtain a new avenue of conducting an effective monetary policy. The reform went to effect in July of 2001 and replaced the existing rules regulating the security market thus far. One of the major innovations in the new framework is the introduction of T-bills with a maturity of two years. Moreover, the minimum nominal amount has been reduced from 5 million to 1 million in the new regulation.

2.3 Recent development

The reform of 2001 was followed by the rapid growth of government securities in the regional market, as shown in figure 1. Between 2001 and 2014, issuances of government3 securities increased from 54.9 billion CFA francs to 3070.5 billion4. Over the first nine months of 2015, funds mobilized amount to 2087.0 billion CFA francs which is identical to the amount mobilized a year ago. As a result, and as shown in figure 2, the number of government securities issued by year increase substantially since 2010. This dynamism is due, firstly, to the abandonment of direct monetary assistance from the Central bank to the national treasuries of WAEMU countries, and secondly, the ambitious public investment programs that are underway in the region.

At the early stages[5], issuance focused on long term government securities, namely 3-, 5-, 7-, and 10-year bonds. Since 2012 it was observed an increase in T-bills in the market with the most popular being the 6 months and 1-year T-bills. The issuance of long-term government (securities with a maturity of more than 2 years) also grow steadily since 2009. The longest maturity for a long-term government bond is 13 years, which was issued in March 2015 by Côte d'Ivoire. In total, from 2007 to 2014, 208 government bonds (all maturities combined) were issued of which more than a half were issued in 2013 and 2014.

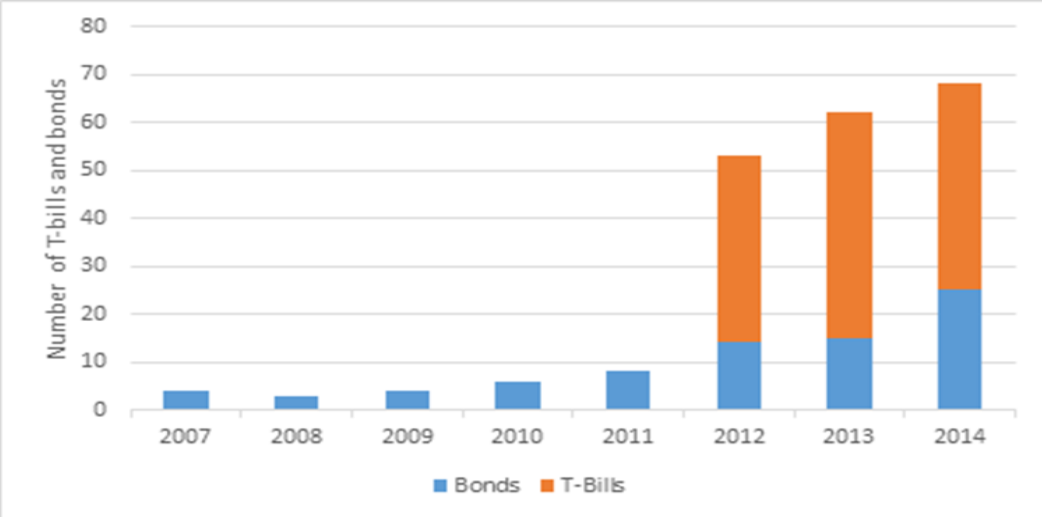
Figure 1: WAEMU, total gross issuance of debt securities, 2007-2014 (in billions of CFA francs)



Note: The figure shows the volume of WAEMU countries government securities issuance by year from 2007 to 2014.
Source: Authors' calculations, based on data from Agence UMOA-Titres.

[3] Amount of Treasury bills and Treasury bonds issued through auctions or syndications.
[4] Source: Agence UMOA-titres
[5] Prior to 2007, only four T-bills with a maturity of one year were issued in the region.

Figure 2: Number of government securities issued by year, 2007-2014



Note: The figure shows the number of WAEMU countries government securities issued by year from 2007 to 2014.
Source: Authors' calculations, based on data from Agence UMOA-titres

Table 1 shows a timeline for the introduction of different maturities from 2007 to 2015. The maturity of government securities in WAEMU varies from 3 months to 13 years. Some of the government securities (4 and 13 years' government bonds) are only issued once. Other government securities were introduced and then discontinued. For example, the 9 months T-bills were introduced in 2012, and they were phased out in 2014. Likewise, the 8 years' government bond was introduced and issued twice in 2014 and then discontinued.

One striking feature of the WAEMU government securities market is the irregularities of issuances. For instance, in Senegal, the one-year T-bills was issued 8 times in 2012, 3 times in 2013, and once in 2014. As a comparison, in the US, the one-year T-bills is issued every four weeks, on a Thursday.

Table 1: Issuance history by maturity

	Maturity (years)											
Year	0.25	0.5	0.75	1	2	3	4	5	7	8	10	13
2007											27/06/07	
2008												
2009									08/09/09			
2010								24/02/10				
2011						08/12/11					12	
2012	16/02/12	22/02/12	19/12/12	12/01/12	27/03/12				17			
2013			6			18		37		28/04/14		
2014	13	30	12/06/14	67	26		02/07/14			2 15/05/14	16/12/14	
2015	20/01/15	05/03/15		12/03/15	12/03/15	02/04/115		03/03/15	18/03/15			03/03/15

Note: The table illustrates the issuance history for the different maturities of WAEMU countries government securities. For each maturity, the first issuance date is in green. The last issuance date as of April 2, 2015, is in red. The number next to each arrow is the total number of issuance dates for the given maturity. The date in black are for securities issued only once.
Source: Authors' calculations, based on data from Agence UMOA-titres

3. The determinant of government securities yields

In this section, I present the factors that may influence government securities yields in WAEMU countries. Additionally, I highlight the expected nature of the relationship between these factors and the yields based on the literature and the specificities of the WAEMU government securities market. I group factors into three categories: mainly macroeconomics factors, market microstructure factors, and external factors.

3.1 Macroeconomic factors or country-specific factors

Risk, whether political or economic, affects investors' assessment of a country's ability to honor its commitments vis-à-vis its creditors. It is well established in the literature that investors always ask for a risk premium when facing uncertainty. I expect this rule to hold in the WAEMU area, and as a country risk increases, so does the government securities yields. Therefore, there is a positive relationship between country risk and yields.

Economic growth has long been a major determinant of government securities yields. In fact, the bond yield curve is widely used by forecasters to predict GDP growth, which means the former is a leading indicator of the latter. According to Harvey (1993), the current shape of the yield curve provides a good prediction of future economic growth. Some authors (Laubach, 2009; Pham, 2015) have tried to link potential GDP to bond yields. For instance, Laubach (2009) found that the best framework to analyze the relationship between potential GDP and sovereign bond yield is the Ramsey model of optimal growth. Pham (2015) using an empirical analysis for China's sovereign bond yield, found that potential GDP affect bonds yields negatively, whereas GDP growth rate affects it positively, albeit not statistically significant. For this study, I hypothesize that the economic growth rate has a negative effect on government securities yields.

Edwards (1986) and Zigman and Cota (2011), among others, showed that inflation and inflation expectations are a major determinant of government securities yields. Higher inflation must be compensated with high government securities yields. Just like for country risk, investors want to be rewarded for rising prices. Inflation expectations may arise out of fear that the Central Bank may monetize government debt, which then leads to a nominal increase in interest rates. I predict that inflation and government securities yields move in the same direction in the WAEMU area.

As noted by Gruber and Kamin (2012), there are many channels through which government fiscal position may increase bond yields. One important channel is the crowding-out effect where fiscal deficit may put pressure on governments to compete with the private sector for the limited financial resource to finance their deficit. Thus, the equilibrium interest rate will be higher; and therefore, discourage the private sector investment. In addition, an increase in government debt may increase interest rate since investors need to be compensated for accumulating more of the debt in their portfolio. Nonetheless, Gruber and Kamin (2012) observed in G-7 countries, in the past several decades, that an increase in government debt did increase bond yields. However, in these countries, as government debt increases, the bond yields have declined even after controlling for inflation. Perovic (2015) has even found, for 10 Central and Eastern European (CEE) countries during the period 2000–2013, a set of non-linearities in the debt-bond yields relationship. He found that the relationship between government debt and bond yields becomes positive only after a threshold debt to GDP ratio of approximately 30% is reached.

Given the above empirical evidence, it is clear that the relationship between government fiscal position and government securities yields is ambiguous. In total, it is difficult to predict the relationship between the two variables. It may be either positive or negative, depending on the structure of the economy in question.

3.2 Market Microstructure factors

The structure of the market for sovereign debt and its functioning play an important effect on bond yields. In their study, Abbas and Sobolev (2009) found that segmentation of the T-bill market between sophisticated financial market players (foreign-controlled banks) and a less-experienced group of investors (domestic pension funds and small banks) explains the volatility of T-bill yields in Tanzania. Additionally, for a panel of 6 West

European countries, Bias et al. (2004) have shown that irregularly issuing securities raises the yields government must pay. The reasoning they put worth for this result is as follows:

> *"When describing their issuance policies, Treasury agencies also emphasize the regularity of the amounts auctioned. Funds or banks, who buy Treasury bills, may indeed value this regularity. Of course, Treasury securities have short maturities, and investors interested in consistently allocating a fraction of their assets to bills must regularly purchase new securities. When there is a steady flow of issues, investors participate consistently in Treasury auctions, to meet the objectives of their asset allocation policies. If in contrast, the flow of issues is erratic, investors can't rely on it to consistently fit their portfolio allocation strategy. This reduces the attractiveness of the security."* (Bias et al., 2004)

As shown in table 1, WAEMU countries government securities issuances do not follow clear calendar pattern. As a result, I anticipate that this phenomenon may increase bond yields in WAEMU countries. More precisely, the regularity of government securities issuance may lower their yields.

Another market microstructure variable that affects government securities yields is the bid-to-cover ratio. By definition, the bid-to-cover ratio is a ratio that compares the number of bids received in a Treasury security auction to the number of bids accepted. Usually, a higher ratio means a stronger demand for particular government security, which will increase the price of that security and reduce its yield. For example, Forest (2017) has shown that an increase in bid-to-cover ratio reduces U.S. Treasury interest rates during the 1990s. Likewise, Beetsma et al. (2013) have found for a sample of European countries a negative relationship between bid-to-cover ratio and bond yields. I expect this relationship between bid-to-cover ratio and bond yields to holds also in the WAEMU government securities market.

Up until recently, WAEMU treasuries agencies could borrow, in the securities market, more than the amount they announced. This happens when the bid-to-cover ratio is high, which means higher demand for the securities. As a result, countries in WAEMU tend to cover all the bids or at least go over the amount they previously announced due to higher demand. One consequence of this behavior is that yields tend to be higher when countries issued more amount of security than they previously announced.

3.3 External factors

External factors variables affect WAEMU countries uniformly. I Include two external factors, namely regional and global excess liquidity[6]. Theoretically, excess liquidity affects negatively government bond yields. That is the bond price tends to increase with excess liquidity. Most empirical studies dealing with liquidity and bond yields focuses more on liquidity risk rather than excess liquidity. One exception is Matsumoto (2011), who studied the impact of global liquidity on bond yields in Latin America countries. He found that an increase in global liquidity is associated with low bond yields.

Hitaj and Onder (2013) in their study, used the ratio of bank reserves to GDP as a proxy for liquidity and found that it is negatively related to government security yields in WAEMU countries. Sy (2010) has noted, excess liquidity in the banking systems has helped the development and sustainability of the WAEMU government securities market. Indeed, regional commercial banks and institutional investors are the largest buyers of WAEMU debt security. In this study, liquidity in the WAEMU banking sector is used as a measure of excess liquidity in the region. I hypothesize, as the theory suggests, that excess liquidity negatively influences securities yields in the WAEMU. Global liquidity will have a similar effect albeit at a lesser degree since very few Eurobonds were issued in recent years.

In total, Table 1 summarizes the factors that determine the variability of government securities yields. It also shows the expected relationship between these factors and government securities yields in the WAEMU countries.

[6] Liquidity is defined as the availability of funds in the economy.

Table 1: Summary of exogenous variables and relationship with the dependent variable

Macroeconomic factors or country-specific factors	Microstructure factors	External factors
Perception of risk (+) Inflation (+) Fiscal balance (+/-) Domestic debt (+/-) Debt service (+/-) Growth rate (-)	Ecart (-) Bid-to-cover ratio (-) Regularity (-)	WAEMU liquidity (-) World liquidity (-)

Note: The positive (+) and negative (-) represent the expected relationship between the dependent and independent variables.

4. Data and methodology

4.1 Data and sources

The data used in this article covers the period between 2007 and 2015 and came from several sources. Data on the government securities yields are provided by the Agence UMOA-titres. Table 2 shows the summary statistics of the dependent variable by country.

Additionally, Agence UMOA-titres provided the data which served to compute the difference between the auction announcement amounts and the amounts of securities issued (ECART), the bid-to-cover ratio (TXCOUV), and the regularity of the amounts issued (REG). TXCOUV is computed by taking the ratio of the value of bids received to the value of bids accepted. As for the REG variable, it is computed based on the standard deviation of the amounts issued during the sample period, normalized by the average amount issued. REG is calculated for each country, for each year, and for each maturity bucket.

Table 2: Summary Statistics of the dependent variable (YIELD) by country

	Benin	**Burkina**	**Cote d'Ivoire**	**Guinea-Bissau**	**Mali**	**Niger**	**Senegal**	**Togo**
Mean	5.662	4.883	6.022	6.145	5.243	5.381	6.505	5.857
Median	5.650	4.250	5.960	6.145	5.031	5.019	6.398	5.637
Max	6.918	6.605	7.601	6.210	6.721	6.496	9.882	8.205
Min	4.710	3.840	3.021	6.080	4.170	4.410	4.915	4.560
St. Dev.	0.631	1.079	0.836	0.092	0.610	0.761	1.133	1.047
Obs	37	23	45	2	32	14	50	27

The data on the following variables: inflation rate, the ratio of the basic fiscal balance to nominal GDP, the ratio of household debt to nominal GDP, the ratio of debt service to nominal GDP and real growth rates come from the EDEN database. In addition, data on banking sector excess liquidity are from the monetary analysis department at BCEAO.

The definition used for country risk is that of the Organization for Economic Cooperation and Development (OECD). According to this definition, country risk consists of risk of transfer and convertibility risk (that is to say, the risk that a government imposes controls on capital movements or currency that prevent an entity to convert local currency into foreign currency and/or transfer funds to creditors outside the country) in case of emergency (eg, war, expropriation, revolution, civil unrest, floods). Thus, data on this variable were obtained from the OECD. Regarding the global liquidity variable, the definition used in this study is that of the Bank for International Settlements (BIS). The data for this variable is from the BIS database.

4.2 Model and estimation

In the literature, several methodologies are used to analyze the determinants of government securities yields. Generally, studies conducted in rich and emerging countries use the yield spread as the dependent variable. Yield spread measures the difference between the yield of government securities of a country relative to that of a reference country (US or Germany) or the average for a group of countries (Alexopoulou et al., 2009). Another approach is to use directly the government securities yields as the dependent variable (Hitaj and Onder, 2013). In both approaches, the dependent variable is a function of key domestic variables (macroeconomic and fiscal). In this study, the model used by Hitaj and Onder (2013) is extended to incorporate government securities market microstructure factors as well as variables common to all WAEMU countries. Thus, the generic function will be:

$$YIELD = f(X, Y, Z) + Error\ term \quad (1)$$

Where YIELD is the interest rate on the government securities, X, Y, and Z are matrices, which contain the fundamental domestic variables, market microstructure variables, and common factors to all WAEMU countries respectively. Specifically, the X matrix is composed of the variable that measures investor perceptions (RISK) and macroeconomic and fiscal variables, including the rate of inflation (INFL), the ratio of fiscal balance to nominal GDP (FISCBAL), the ratio of domestic debt to nominal GDP (DOMDEBT), the ratio of debt service to nominal GDP (INTDEBT) and the real growth rate (GPIB). Matrix Y includes security market microstructure variables. These variables include the difference between the amounts tendered and the amounts served (ECART), bid-to-cover ratio (TXCOUV), and regularity of the amounts issued in the securities market (REG). Finally, matrix Z has two variables, namely excess reserves in WAEMU area (LIQUID) and global liquidity (WLIQUID).

Following Biais et al. (2004), the econometric equations to estimate are:

$$YIELD_i = \alpha + \sum_{j=1}^{J} \beta_j X_{ij} + \sum_{k=1}^{7} \gamma_k 1_k + \theta * INSTR_i + \varepsilon_i \quad (2)$$

$$YIELD_i = \alpha + \delta * Risk_i + \rho * Infl_i + \tau * Intdebt_i + \sum_{j=1}^{J} \beta_j Y_{ij} + \sum_{k=1}^{7} \gamma_k 1_k + \theta * INSTR_i + \varepsilon_i \quad (3)$$

$$YIELD_i = \alpha + \delta * Risk_i + \rho * Infl_i + \sum_{j=1}^{J} \beta_j Z_{ij} + \sum_{k=1}^{7} \gamma_k 1_k + \theta * INSTR_i + \varepsilon_i \quad (4)$$

Where the indexes i and j denote, the observed data for each variable over the period 2007-2015 and the variables in the matrix X, Y, and Z respectively. 1_k are the countries dummies for the seven nations in the region which take the value of 1 for the country k and 0 everywhere else. The eighth country (Guinea-Bissau) was excluded to avoid perfect multicollinearity. These dummies variables allow to take into account the specificities of each country that are not captured by the explanatory variables. Finally, $INSTR_i$ is a dichotomous variable that takes the value1 for the YIELD of a treasury bill and 0 if not (obligation note). $INSTR_i$ differentiates the average impact that these two types of instruments have on the yield. In addition, the variables $Risk_i$ and $Infl_i$ are added to equations 3 and 4 to control respectively for the effect of investors perception and price levels on the yield.

All three econometrics equations (2, 3, and 4) were estimated using Fixed Effects (FE) regressions methods. More precisely, Least Square Dummy Variable (LSDV) models were utilized instead of the "within" estimations. Indeed, LSDV estimations require dummies variables whereas for the "within" estimations do not. Although both estimations techniques yield the same results, the LSDV estimations are widely used in relation to their ease of estimation and interpretation of the coefficients.

5. Empirical results

Table 1 shows the estimation results of macroeconomic variables on the yield. In accordance with economic theory, inflation acts positively on the government securities yields. Indeed, in all the models that were estimated, the coefficient of inflation is positive and significant at the 5% level of significance. In other words, investors take into account the level of inflation when investing in government securities. In this regard, the BCEAO should continue its inflation targeting policy at around 2% to 3% in order to reduce the government securities yields in the region.

The perception of country risk also impacts positively the government securities yields in WAEMU area. This result corroborates the predictions of the theory, which states that investors demand higher interest rates in the presence of uncertainties related to the ability of a state to honor its commitments. This result also suggests that WAEMU countries should take appropriate measures to remove all ambiguities over their solvency.

On the other hand, the fiscal variables, including the public deficit, domestic debt, and debt service, have the expected signs but are not statistically significant. In addition, the coefficients associated with these variables are very low. In other words, the interest rates on government securities are not influenced by budgetary performance. These results confirm those obtained by Hitaj and Onder (2013). However, the ratio of debt service becomes negative and significant when the regularity of issuances is taken into account. This result means that investors take into account the regularity of government securities issuance in their assessment of fiscal variables, including debt service.

Table I: The results of macroeconomic variables

	Model I	**Model II**	**Model III**	**Model IV**	**Model V**
CONST	3.85*** (3.085)	3.80*** (2.984)	3.80*** (3.006)	3.87*** (3.077)	3.87*** (3.116)
RISK	0.350** (1.894)	0.347* (1.858)	0.344* (1.863)	0.371** (2.026)	0.339** (1.851)
INFL	0.076** (2.313)	0.076** (2.303)	0.08** (2.336)	0.078*** (2.403)	0.080** (2.450)
FISCBAL		0.000 (0.376)			
DOMDEBT			0.01 (0.657)		
INTDEBT				0.195 (1.311)	
GPIB					-0.001** (-2.015)
INSTR	-1.35*** (-13.780)	-1.35*** (-13.750)	-1.36*** (-13.815)	-1.357*** (-13.834)	-1.368*** (-13.843)
BEN	-0.46*** (-3.705)	-0.4*** (-1.891)	-0.37*** (-1.647)	-0.614*** (-2.390)	-0.412*** (-2.578)
BUR	-1.46*** (-8.715)	-1.4*** (-5.811)	-1.37*** (-5.556)	-1.626*** (-5.930)	-1.405*** (-7.087)
RCI	-0.99*** (-6.016)	-0.93*** (-3.741)	-0.9*** (-3.614)	-1.161*** (-4.232)	-0.937*** (-4.920)
MAL	-1.07*** (-7.429)	-0.83 (-3.836)	-0.8*** (-3.583)	-1.061*** (-4.206)	-0.817*** (-5.050)
NIG	-0.08*** (-8.896)	-1.01*** (-4.876)	-0.97*** (-4.382)	-1.235*** (-4.781)	-1.009*** (-6.393)
SEN	-0.89 (-0.376)	-0.03 (-0.097)	0 (0.000)	-0.234 (-0.732)	-0.042 (-0.170)
TOG	-0.87*** (-6.021)	-0.81*** (-3.661)	-0.78*** (-3.332)	-1.04*** (-3.926)	-0.82*** (-4.605)
Adjusted R^2	61.29%	61.15%	61.18	61.32	61.36%
Obs	229	229	229	229	229

T-statistics in parentheses (***) significant at 1%; (**) significant at 5%; (*) significant at de 10%.

The results of fiscal variables can be explained by the negative relationship between the yields and the real GDP growth rate. Indeed, the coefficient for this variable is negative and significant, although relatively small. This result means that investors are more concerned about the overall dynamics of the economy than the public deficit and domestic debt. The reason is that countries with high rates of economic growth would be able to honor its commitments vis-à-vis its creditors.

Table 2 shows the results of the impact of microstructure variables on the yields. The coefficient of ECART has the expected sign. Thus, the government securities yields are low when differences between the announcement amounts and the amounts issued gets smaller. In other words, countries that issued the amounts, they previously announced benefit from relatively low yields.

The bid-to-cover ratio negatively impacts the government securities yields. Hence, an increase in investor participation in Issuances has the effect of reducing the borrowing rate on the regional market. This result calls on WAEMU countries to maintain investor confidence through sound public finances management and rigorous macroeconomic policies in order to create the conditions for a massive participation of investors in the government securities market.

Regarding the coefficient of the regularity, it is negative and significant. In other words, erratic issuance of government securities raises the yield, on the other hand smoothing the flow of Issuances reduced it. The same result was obtained by Bias et al. (2004) on the government bond market in the Eurozone. It would be appropriate that WAEMU countries take steps to ensure the regularity of tendered amounts. In this regard, countries should develop and disseminate issuance calendars of government securities with amounts programmed to allow investors to better plan their investments. Moreover, countries must impose rigor and discipline regarding the calendar that they choose to develop[7].

Table II: Results of the variables related to the microstructure

	Model VI	**Model VII**	**Model VIII**	**Model IX**
CONST	3.36** (2.505)	3.80*** (3.262)	3.56*** (3.067)	4.18*** (3.460)
RISK	0.551*** (-3.313)	0.542*** (3.347)	0.530*** (3.180)	0.331* (1.849)
INFL	0.128*** (5.276)	0.127*** (5.277)	0.125*** (5.244)	0.078** (2.337)
ECART	-0.076*** (-3.261)	-0.074*** (-3.214)	-0.071*** (-2.968)	
TXCOUV				-0.24*** (-3.261)
REG			-0.182** (-1.753)	
INTDEBT		-0.425** (-1.807)		
INSTR	-1.46*** (-12.697)	-1.445*** (-12.448)	-1.460*** (-13.129)	-1.272*** (-13.017)
BEN	-0.538***	-0.976***	-0.670***	-0.380**

[7]. One of the goals of Agence UMOA-titres is to help WAEMU countries to achieve this objective.

	(-4.568)	(-3.530)	(-4.595)	(-2.415)
BUR	-1.789*** (-10.261)	-2.217*** (-7.654)	-1.857*** (-11.084)	-1.368*** (-7.084)
RCI	-1.114*** (-8.592)	-1.546*** (-5.923)	-1.191*** (-8.554)	-0.981*** (-5.220)
MAL	-1.135*** (-11.314)	-1.557*** (-6.450)	-1.223*** (-10.815)	-0.883*** (-7.886)
NIG	-1.246*** (-10.968)	-1.626*** (-7.548)	-1.325*** (-11.164)	-0.974*** (-6.274)
SEN	-0.199 (-1.216)	-0.633** (-2.104)	-0.320** (-1.833)	-0.030 (-0.125)
TOG	-1.19*** (-9.000)	-1.6*** (-6.768)	-1.27*** (-9.444)	-0.834*** (-4.862)
Adjusted R2	75.00%	75.20%	75.42%	62.21%
Obs	229	229	162	229

T-statistics in parentheses (***) significant at 1%; (**) significant at 5%; (*) significant at de 10%.

Table 3, which summarizes the impact of external factors on the Yield, shows that contrary to the predictions of the theory, the variable liquidity in the WAEMU positively affects the yield of government securities. Several factors could explain this result. Indeed, some Member States tend to incur debt beyond the needs expressed through the amounts they might have chosen to issue. In addition, countries that come on the market for government securities from time to time without meeting their own emission calendars, manage to raise funds due to excess liquidity of investors. However, these investors demand higher interest rates in conjunction with the disruption that this may have on their own investment planning.

Table III: Results of the external factors variables

	Model XI	**Model XII**
CONST	-4.95 (-1.575)	7.82 (2.815)
RISK	0.376** (2.088)	0.365** (1.987)
INFL	0.089*** (2.901)	0.083*** (2.598)
LIQUID	0.659*** (3.103)	
WLIQUID		-0.454 (-1.530)
INSTR	-1.425*** (-14.018)	-1.378*** (-14.367)
BEN	-0.451*** (-3.674)	-0.488*** (-4.243)
BUR	-1.466*** (-8.767)	-1.501*** (-9.268)
RCI	-0.709*** (-3.917)	-1.056*** (-6.314)
MAL	-0.862***	-0.922***

	(-7.192)	(-8.006)
NIG	-1.057*** (-8.490)	-1.111*** (-9.649)
SEN	0.078 (0.348)	-0.101 (-0.475)
TOG	-0.9*** (-6.440)	-0.91*** (-6.732)
Adjusted R2	62.75%	61.55%
Obs	229	229

T-statistics in parentheses (***) significant at 1%; (**) significant at 5%; (*) significant at de 10%

The coefficient of global liquidity variable has the expected sign but is not significant. This result could be explained by the relatively low presence of foreign investors on the government securities market in the region. However, it should be noted that some WAEMU countries, including Côte d'Ivoire and Senegal, are gradually opening up to foreign investors through the issuance of Eurobonds. Other WAEMU countries plan to follow suit, and eventually, global liquidity is expected to play a decisive role on government securities yields in the region.

6. Conclusion and recommendations

WEAMU countries have come a long way since the reform of 2001, which established the regional government securities market. Recently, this market has experienced an exponential growth both in volume and issuance of government securities. Yields associated with these securities vary vastly across countries even though they belong to the same monetary Union.

In order to identify the main drivers of government securities yields, this study uses econometric models to analyze a number of relevant variables choosing on the basis of theory and empirical literature. The results show that government securities yields are positively impacted by inflation and country risk. However, growth rate, bid-to-cover ratio, the regularity of issuance, and the differences between the announcement amounts and the amounts issued impact the yields negatively. Overall, the study showed that government securities yields depend on countries economic growth, as well as their organizational capacity of effectively managing the issuance of government securities.

In this context, WAEMU countries should monitor their economic performance and implement structural reforms in order to maintain sustained growth. In addition, WAEMU countries are invited to disseminate quality data on their macroeconomic and fiscal conditions. Finally, WAEMU should improve their organizational skills in the emission of government securities. In this regard, they should implement strategies to enable them to ensure a regular presence in the government securities market.

Overall, it should be noted that the creation of WAMU-Securities Agency has allowed to take into account the recommendation related to the dissemination of quality data on the macroeconomic condition as well as the improving organizational capacity in the issuance of government securities. To consolidate this achievement, WAEMU countries should rely more on WAMU-Securities Agency to strengthen its implementation of these recommendations.

References

Abbas, S. M. A., & Sobolev, Y. V. (2009). High and volatile treasury yields in Tanzania: The role of strategic bidding and auction microstructure. *South African Journal of Economics, 77*(2), 257-281. doi://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291813-6982/issues

Alexopoulou, I., Bunda, I., & Ferrando, A. (2010). Determinants of government bond spreads in new EU countries. *Eastern European Economics, 48*(5), 5-37.
Beetsma, R., Giuliodori, M., de Jong, F., & Widijanto, D. (2016). Price effects of sovereign debt auctions in the euro-zone: The role of the crisis. *Journal of Financial Intermediation, 25*, 30-53. doi://www.sciencedirect.com/science/journal/10429573
Biais, B., Renucci, A., & Saint-Paul, G. (2004). Liquidity and the cost of funds in the European treasury market. *IDEI Working Paper,* (n. 285)
Diouf, M. A., & Boutin-Dufresne, F. (2012). *Financing growth in the WAEMU through the regional securities market: Past successes and current challenges* Washington, DC.
Edwards, S. (1986). The pricing of bonds and bank loans in international markets: An empirical analysis of developing countries' foreign borrowing. *European Economic Review, 30*(3), 565-589. doi://www.sciencedirect.com/science/journal/00142921
Engen, E. M., & Hubbard, R. G. (2004). *Federal government debt and interest rates* MIT Press.
Forest, J. J. (2012). The effect of treasury auction announcements on interest rates: 1990-1999. *Papers.Ssrn.Com,*
Gale, Peter R Orszag and William G. (2002). *The economic effects of long-term fiscal discipline.* Brookings. Retrieved from https://www.brookings.edu/research/the-economic-effects-of-long-term-fiscaldiscipline/
Gruber, J. W., & Kamin, S. B. (2012). *Fiscal positions and government bond yields in OECD countries*
Hanh Pham, T. H. (2015). China's sovereign bond yield: Some lessons. *Applied Economics Letters, 22*(1-3), 223-27. doi://www.tandfonline.com/loi/rael20
Harvey, C. R. (1993). *Term structure forecasts economic growth* The Association for Investment Management and Research.
Hitaj, E., & Onder, Y. K. (2013). *Fiscal discipline in WAEMU: Rules, institutions, and markets* Washington, DC. doi:10.5089/9781484398685.001
Laubach, T. (2009). New evidence on the interest rate effects of budget deficits and debt. *Journal of the European Economic Association, 7*(4), 858-885.
Maleevic Perovic, L. (2015). The impact of fiscal positions on government bond yields in CEE countries. *Economic Systems, 39*(2), 301-316. doi:10.1016/j.ecosys.2014.10.006
Matsumoto, A. (2011). *Global liquidity: Availability of funds for safe and risky assets* Washington, DC.
Sy, A. N. R. (2010). Government securities markets in the west african economic and monetary union: A review. *African Development Review, 22*(2), 292-302. doi:10.1111/j.1467-8268.2010.00238.x
Zigman, A., & Cota, B. (2011). The impact of fiscal policy on government bond spreads in emerging markets. *Financial Theory and Practice, 35*(4), 385-412. doi://www.fintp.hr/en/archive/

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 418-428
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.97

Implementation of Islamic Work Values in Realizing Sharia Good Corporate Governance and Its Implications in Stakeholders Oriented Values (SOV) and Financial Performance of Islamic Banking in Indonesia

Hamdani[1], Yuswar Zainul Basri[2], Khomsiyah[3], Syarif Surbakti[4]

[1] Department of Management, University of Muhammadiyah Tangerang, Tangerang, Republic of Indonesia.
[2] Professor, Department of Accounting, Trisakti University, Jakarta, Republic of Indonesia
[3] Department of Accounting, Trisakti University, Jakarta, Republic of Indonesia
[4] Department of Accounting, Sekolah Tinggi Ekonomi Islam Tazkia, Bogor, Republic of Indonesia

Correspondence: Hamdani, Department of Management, University of Muhammadiyah Tangerang, Tangerang, Republic of Indonesia, email: hamdani_82m@yahoo.com

Abstract
This research examines the effect of Islamic work values on sharia good corporate governance (GCG), and its implications for stakeholders oriented values (SOV) and Islamic banking financial performance in Indonesia. The method of analysis uses Structural Equation Modeling (SEM) with a partial least square (PLS) test. The sample of this study is Islamic banking with an analysis unit of 8 Islamic Commercial Banks in Indonesia. The sampling technique uses a sampling method randomly. The results of the study show that Islamic work values positively influence SOV. Likewise, Islamic work values have a positive effect on sharia GCG. While Islamic work values have no positive effect on sharia GCG and have no implications for SOV. Likewise, Islamic work values do not have a positive effect on financial performance. While Islamic work values have a positive and significant effect on sharia GCG and have implications for financial performance. Islamic work values, combined with sharia GCG, are still oriented to shareholders. For Islamic banking, the GCG model adopted in Indonesia refers to the Continental European model, which is still oriented to shareholders. High moral commitment is needed to implement Islamic work values and Islamic GCG so that it can have implications for the interests of stakeholders. For regulators, GCG reforms need to consider specific business, legal, and social societies so that the objectives of sharia GCG can be achieved optimally.

Keywords: Islamic Work Value (IWV), Sharia Good Corporate Governance (SGCG), Stakeholders Oriented Values (SOV), and Financial Performance (FP)

1. Introduction

Good Corporate Governance (GCG) the 1970s in the United States, since the disclosure of corruption scandals involving large companies, such as: Enron, Worldcom, Tyco, London & Commonwealth, Poly Peck, Maxwell, and others. GCG in Asia began to develop in the late 1990s. While in Indonesia it began in mid-1997, culminating in the economic crisis. The trigger factor is the same, namely the occurrence of fraud cases involving several companies, such as: PT. Telkom Tbk, PT. Indo Mobil Suk International, PT. Kimia Farma Tbk, PT. Lippo Bank

Tbk, PT. BNI Tbk, Bapindo, PT. Indo Farma (Harahap, 2011: 55). These conditions indicate that the implementation of GCG in Indonesia has not been effective.

The survey conducted by the International Finance Corporation (IFC) (2012) shows that the Indonesian GCG Index is 3.0. This index is higher than in the Philippines (2.6) and Vietnam (2.9). But it is lower compared to China (3.5), Thailand (3.5), Korea (5.4), and Japan (8.0). The results of the assessment of corporate governance in Indonesia showed unsatisfactory results and efforts to improve corporate governance had not been carried out comprehensively (OJK, 2014). Although GCG enforcement efforts continue to be carried out through the formation of GCG structures (independent commissioners, audit committees, remuneration committees, risk committees, corporate secretary) and best practice guidelines and code of conduct for board of directors and commissioners, some practitioners and academics feel the impact of GCG implementation as expected (Syakhroza, 2003). Various obstacles to the implementation of GCG in Indonesia, especially related to business ethics (Lukviarman, 2004: 139).

Research Gilani (2015), states that ethics has created the image of Islamic banking. The image that is based on banking ethical values that are usury-free prioritizes moral values, social responsibility, and honesty in business. The decline in the image of Islamic banking is precisely due to the problem of violations of work ethics or the value of work of employees, especially fraud committed by employees (internal fraud) whose data is very volatile and does not decrease further. Internal fraud data occurred in Foreign Exchange BUSN, which amounted to 234 cases, Non-Foreign Exchange BUSN as many as 53 cases (Syariah Bank GCG 2010-2014). It is alleged that the practice of internal fraud in Islamic banking is caused by weak corporate governance. Internal fraud phenomenon as a form of ethical violation carried out by employees.

Islamic banking that implements Islamic GCG has not been able to grow and contribute significantly in Indonesia, which is predominantly Muslim (Sari et al. 2013). Indonesia is one of the countries with the largest Muslim population in the world with a Muslim population of around 207,176.162 million or 87.21% (Ministry of Religion, 2013), to date, the market share of Islamic banking has not reached 5% or 4.61% in 2015 (OJK, 2016). These conditions indicate that Islamic banking is only an alternative, not an obligation for Indonesian Muslims. Especially when Islamic banks are only to meet market trends, not merely as a necessity.

The quality of implementing GCG in sharia commercial banks in Indonesia is at a predicate in accordance with applicable regulations in PBI No. 11/33 / PBI of 2009 which are detailed in SEBI No. 12/13 / DPbS in 2010. However, there are still some shortcomings in the structure of GCG, especially the structure of the sharia supervisory board and the commission structure that is not yet in accordance with appendix 4 No. SEBI. 12/13 / DPbS in 2010 (Syam and Najda, 2012: 204). Operationally, Islamic banking GCG in Indonesia refers to two principles. The first principle is ShiFat and the behavior of the Prophet and Rasul in business activities, namely shidiq, fathonan, amanah, and tablig. The second principle is the principle used in the business world in general, namely transparency, accountability, responsibility, independence and fairness, and equality. The two operational principles are needed to achieve sustainability while still taking into account the stakeholders (KNKG GGBS, 2011).

This study examines the effect of Islamic work values on sharia GCG and its implications for SOV and financial performance. Stakeholders are seen in a broader sense. This research is oriented towards maximizing the value of stakeholders in the form of shareholders value, and stakeholders oriented values. This research is in line with the concept of maqashid sharia to achieve rahmatan lil`alamin, which is nothing but to achieve falah (prosperity in the world and the hereafter). In contrast to studies conducted by Abbasi et al. (2012), which links Islamic work ethics with shareholders value. Stakeholders are seen as parties that deal directly with companies such as shareholders, customers, and employees. The company will provide value to stakeholders in the form of shareholders value. There are different perspectives, Abbasi et al. (2012) are more oriented towards value maximization for direct stakeholders in the form of shareholders values.

2. Literature Study and Hypothesis Development

2.1 Effect of Islamic Work Values on SOV

Ethical encouragement comes from the awareness of individual business people to carry out business practices that prioritize the sustainability of the company, the interests of stakeholders, and avoid ways of creating temporary profits (KNKG, 2006). Yunus et al. 2012, states that the value of Islamic work is part of Islamic work ethics, which shows a moderate and significant influence on organizational commitment. Companies with high commitment will provide value to all stakeholders fairly. This is in line with the research Salem and Agil (2012), where individual Islamic ethics are positively related to organizational commitment. Abbasi (2012) examines the impact of Islamic work ethics based on the Koran and Hadith to strengthen managerial integrity in increasing shareholder value (SV). Thus this argument can be used to formulate the following hypothesis:
H1: There is an influence of Islamic work values on SOV.

2.2 Effects of Islamic Work Values on Sharia GCG Implementation

The implementation of ethics in business and good corporate governance is one of the sustainable competitive advantages (Nawatmi, 2010: 53). Sternberg (1994) introduces the theological approach to understanding the relationship between business ethics (ethic business) and corporate governance. In the opinion of Lukviarman (2004), without the basis of good morality and ethics and the high nature of opportunistic causes of failure in the implementation of good corporate governance. Because any sophisticated system device that is built will not be able to provide optimal results if it is not accompanied by the willingness of individuals or organizations to obey or obey the rules of the game that has been set. The hypothesis can be formulated as follows:
H2: There is an influence of Islamic work values on sharia GCG.

2.3 Effect of Islamic Work Values on the Implementation of Sharia GCG and Its Implications in SOV

The work value model is important for employees and managers to strengthen one's beliefs in the organization and institutional values to help realize governance in a healthy organizational work environment and have an impact on positive work behavior to improve organizational performance (Khanifar et al. 2011 : 247). Effective implementation of GCG is needed to protect the rights of all stakeholders, uphold justice, honesty, and protect human needs. Islamic economists form GCG based on the stakeholder paradigm and contribute substantially to strengthening the theoretical foundation of the GCG model by reconstructing existing sharia principles regarding contract ownership rights (Cahya 2013: 25). A strong commitment is needed for the management to carry out Islamic work values. The implementation of Islamic work values shows a moderate and significant relationship to organizational commitment (Yunus et al. 2012). With a strong commitment, GCG implementation can work well. Research Abbasi et al. (2010) and Abbasi et al. (2012) show that the value of Islamic work brings the organization to value-based management by ensuring shareholders' SOV includes profitable business, employee welfare, and customer satisfaction. The principles of GCG are very important to be implemented in Islamic banking. A GCG model, The Franco German Model, focuses on efforts to maximize the value of stakeholders. This model provides equal treatment and protection to all stakeholders. Thus none of the stakeholders were sacrificed from Islamic banking activities (Indrawati, 2008: 253). Thus this argument can be used to formulate the following hypothesis:
H3: There is an influence of Islamic work values on the implementation of sharia GCG and its implications for SOV.

2.4 Effect of Islamic Work Values on Financial Performance.

Leadership determines success in achieving Islamic banking performance. Corporate ethical values are the most important factor for ethical leadership and the success of employee performance. Individual employee performance will be achieved if company management applies ethical values (Sabir et al. 2012). According to Sutono and Budiman (2009), leadership and work ethos simultaneously have a significant influence on employee performance. Spiritual motivation, such as faith motivation, worship motivation, and muamalat motivation, can provide implications for increasing employee religious performance (Muafi, 2003). According to Wibisono (2010), Faith in the Apostle by implementing its main characteristics (shidiq, fathana, amanah, and tabligh) has a positive influence on religious performance and has implications for increasing religious performance. Understanding of religious values will be implemented in the work ethic of an individual who will then influence the results of his work. Therefore, to improve performance certainly does not only look at the material aspects but also must begin to consider moral and spiritual aspects as an effort to build employees who are characterized by Islam (Amaliah et al., 2013). Thus this argument can be used to formulate the following hypothesis:

H4: There is an influence of Islamic work values on financial performance.

2.5 Effect of Islamic Work Value on Sharia GCG and Its Implications on Financial Performance.

Islamic work ethics brings organizations towards value-based management by ensuring the value that will be obtained for shareholders, employees, customers, and society in general so that it can, in turn, improve company performance (Galbreath, 2006). Islamic work values as a basic foundation in the implementation of sharia GCG. According to Lukviarman (2004), without the foundation of good morality and ethics as well as the high opportunistic nature that causes failure in the implementation of good corporate governance. Thus Islamic work ethics are very important in supporting sharia GCG to optimize value for shareholders while taking into account other stakeholders. GCG is expected to be able to increase the competitiveness of companies nationally and internationally, so that market trust can drive investment flows, national economic growth, and sustainable corporate performance. Research Ghaffar (2014), shows that GCG has a positive effect on profitability as a measure of financial performance in Islamic banks. Research Mousavi (2012), shows that board size is positively related to performance rather than board composition. Aggarwal (2013), shows that GCG has a positive and significant effect on the company's financial performance. In other words, good corporate governance practices can improve company performance, reduce the risk of board actions to benefit themselves. Thus this argument can be used to formulate the following hypothesis:

H5: There is an influence of Islamic work values on sharia GCG and its implications for financial performance. Relationships or influences between variables that are reflected in the conceptual framework are as follows:

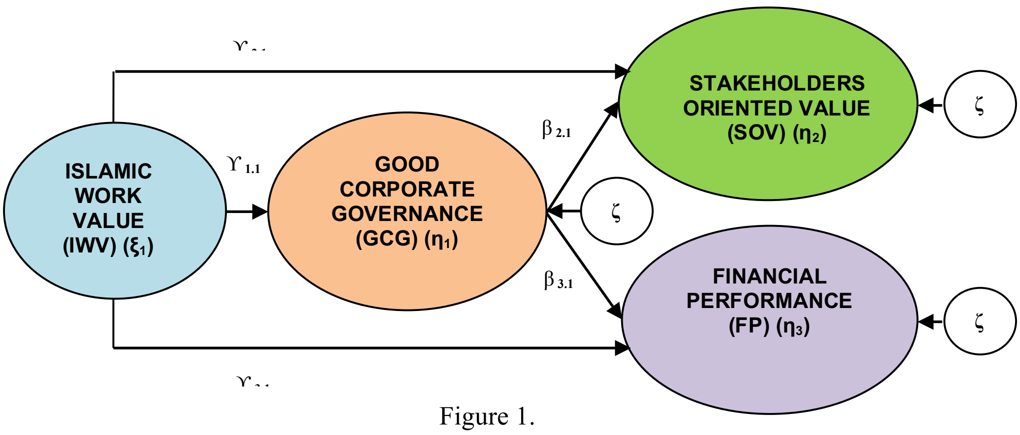


Figure 1.

3. Research Methodology

This study used a survey method by distributing questionnaires to collect data. The population of this study is the banking industry with research samples of 12 Islamic Commercial Banks in Indonesia. From the number of banks obtained data as many as 132 respondents with different positions and levels. To accommodate a small number of samples, this study uses Structural Equation Modeling (SEM) with Partial Least Square (PLS) Software. The variables of this study are Islamic Work Value, good corporate governance (GCG), stakeholders oriented value, and financial performance. Measuring Islamic work values and stakeholder oriented values using the Likert scale 1-5. Islamic work values refer to the nature and behavior of the Prophet and Apostle, namely: shidiq, fathonah, amanah, and tabligh. The SOV was developed from a self-assessment of the asean corporate governance scorecard implementation. The measurement of Islamic GCG uses secondary data with reference to PBI Number: 11/33/PBI/2009 and SE BI No. 12/13/DPbS/2010. This provision is in line with POJK No: 8/POJK.03/2014 and OJK SE No: 10/SEOJK.03/2014. Financial performance is proxied by NOM, ROA, ROE, and BOPO referring to PBI No. 9/1/PBI/2007, SEBI 9/24 / DPbS / 2007, POJK No: 8 / POJK.03 / 2014 and OJK SE No: 10/SEOJK.03/2014. This study is a combination of cross-sectional data and time series data, also known as panel data.

4. Results and Discussion

4.1 Respondent Demographics

Questionnaires were sent to all 12 Islamic banks in Indonesia. Respondents in this study were the Board of Commissioners, Board of Directors, Audit Committee, Risk Monitoring Committee, Remuneration, and Nomination Committee, Sharia Supervisory Board, Bank Executive Officers (Head of Division, Corporate Secretary, Head of Treasury, Finance Division, Corporate / Business Planning) and Compliance Division. The results of the sample selection based on the criteria obtained by 8 Islamic banks that contributed to the study with a total sample of 51 people, namely: PT. Bank Muamalat Indonesia as many as 11, PT. BNI syariah bank as many as 7, PT. Bank Victoria Syariah11, PT. Bank Maybank Syariah Indonesia as many as 3, PT. BRI Syariah Bank as many as 5, PT. Mega Syariah Bank as much as 4, PT. Bank Syariah Bukopin as many as 5, and PT. BCA Syariah Bank as much as 5. Based on the majority of sex, there are 38 or 75% of men. Based on age, the age of 45-54 was dominated by 25 or 49%. Based on the majority experience of <25 as many as 24 or 47% and as many as 34 or 66% of respondents have educational backgrounds in economics, management, public administration or business administration.

4.2 Analysis of Descriptive Statistics

Table 4.1 Description of Islamic Ethics

Variables Indicator	N	Min	Max	Mean	Std. Deviation
Shiddiq	8	4.00	5.00	4.8750	0.35355
Fathanah	8	4.00	5.00	4.1250	0.35355
Amanah	8	4.00	5.00	4.8750	0.35355
Tabligh	8	4.00	5.00	4.8750	0.35355

Source: processed data

Indicators of Islamic Ethics (Siddiq, Fathanah, Amanah, and Tabligh) are on a scale of 4, which means that Islamic banks have implemented Islamic ethics but not fully. The implementation of sharia GCG in sharia banking has averaged 2.4510 (scale 2), reflecting that bank management has implemented sharia GCG well.

Table 4.1 Description of Stakeholders Oriented Values (SOV)

Variables Indicator	N	Min	Max	Mean	Std. Deviation
Basic rights of shareholders	8	4.00	5.00	4.8750	0.35355
Equitable treatment of shareholders	8	4.00	5.00	4.1250	0.35355
Protection of stakeholders' rights	8	4.00	5.00	4.8750	0.35355

Source: SPSS Test Results

The SOV indicator on average is on a scale of 4. This reflects the management of Islamic banks oriented to the interests of stakeholders, but not fully.

Table 4.3 Financial Performance for 2011-2015

Variables	Year	Min	Max	Mean	Std. Deviation
NIM/NOM	2011	2.12	15.33	6.3225	3.81070
	2012	0.89	13.94	5.6316	3.86519
	2013	1.04	10.66	5.2057	2.86236
	2014	0.48	8.33	3.4947	2.27776
	2015	-32.92	1.81	-2.4449	8.01528
ROA	2011	0.20	6.93	2.4924	2.45909
	2012	0.55	3.81	1.5649	0.82569
	2013	0.50	2.87	1.0347	0.70081
	2014	-1.87	3.61	0.1516	1.35366
	2015	-20.13	1.43	-1.1841	4.96213

Variables	Year	Min	Max	Mean	Std. Deviation
ROE	2011	1.19	20.79	11.9875	7.76477
	2012	2.82	57.98	16.5318	15.13197
	2013	3.70	26.23	9.3920	5.96493
	2014	-17.61	10.83	-0.6878	9.48237
	2015	-32.04	11.39	-1.3967	11.71783
BOPO	2011	55.18	99.25	87.4320	9.18261
	2012	53.77	91.59	84.5057	8.54533
	2013	67.79	93.86	88.0661	6.50565
	2014	69.60	143.31	103.8192	22.02519
	2015	89.63	192.60	105.5971	24.36811

Source: SPSS Test Results

Financial performance that is proxied by NPM, ROA, ROE, and BOPO shows poor performance and tends to decline in 2011-2015.

4.3 Evaluation of the Measurement Model

4.3.1 The outcome of the Outer Model / Measurement Model

In convergent validity testing, the loading value of each reflective indicator has met the convergent validity requirements, which are above 0.7 and significant. In discriminant validity testing, the loading value for each indicator of Islamic work value is 0.558, and stakeholders oriented values (SOV) are 0.574. All indicators (Islamic work values and SOV) have AVE values that meet the requirements greater than 0.50. While for composite reliability testing shows a good value because it is above 0.7, namely: 0.900 for Islamic Work Value (IWV) and 0.930 for stakeholder oriented values (SOV) variables. The Cronbach alpha value of each variable shows a value above 0.7, namely: 0.847 for the construct of Islamic Work Value (IWV) and 0.916 for stakeholder oriented values (SOV) variables.

4.3.2 Evaluation of Formative Variable Models

From the output of the weight indicator, it can be seen that the indicators forming GCGS variables are <0.001 and FP (NOM <0.001, ROA = 0.003, ROE <0.001 and BOPO = 0.048) with a significance value of p <0.05, which means the GCGS and FP indicators are valid. For multicollinearity / Collinearity testing, the GCGS variable variance inflation factor (VIF) value is 0 (zero) and FP (NOM is 6,505, ROA is 4.08, ROE is 3,408 and BOPO is 2,732). The resulting variance inflation factor (VIF) is <10, which means there is no problem with collinearity between indicators. Likewise, the results of the weight-loading sign (WLS) test are equal to 1, which means that it has met the recommended requirements.

4.3.3 Inner Model Results or Structural Models

The test results of the structural model show Adjusted R-Squared SOV variables of 0.582, meaning that SOV variations can be explained by variations in IWV, sharia GCG, and FP by 58.2% and the remaining 41.8% influenced by other variables outside the research model. The Adjusted R-Squared value is included in the strong category. Adjusted R-Squared sharia GCG variables of 0.092 showed that variations in sharia GCG could be explained by variations in IWV, SOV, and FP by 9.2% and the rest by 90.8% influenced by other variables outside the research model. The Adjusted R-Squared value is categorized as weak. Value of Adjusted R-Squared construct of the financial performance of 0.350 shows that the variation of CoW can be explained by variations in IWV, sharia GCG and SOV of 35.0% and the remaining 65.0% is influenced by other variables outside the research model. The Adjusted R-Squared value is categorized as moderate.

Besides seeing the Adjusted R-Square value, the PLS SEM model was also evaluated by looking at Q-Square (usually called the Stoner-Geisser Coefficient). Q-Square is used to measure how well the observation value is generated by the model and also its parameter estimation (Ghozali, 2014: 41). The model with predictive validity must have a Q-Square value greater than zero (Sholihin and Ratmono, 2013: 72-73, Ghozali, and Latan, 2014:

106, Ghozali, 2014: 42). The results of the estimation of the research model show good predictive validity, which is 0.598 (SOV), 0.110 (GCGS), and 0.379 (FP) because it is greater than zero.
The estimation results show that the effect size of IWV's influence on sharia GCG is 0.110, the effect of IWV on SOV is 0.573, the effect of IWV on FP is 0.008, the effect of sharia GCG on SOV is 0.025 and the effect of sharia GCG on FP is 0.383.

Table 4.4. *Effect Sizes for Path Coefficients*

	IWV	GCGS	SOV	FP
IWV				
GCGS	0.110			
SOV	0.573	0.025		
FP	0.008	0.383		

Source: processed data

The weak effect size is IWV for FP at 0.008 and GCGS for SOV at 0.025. Because the effect size value is not far from 0.02 or equal to 0.02 shows that the influence of the predictor latent variable is very weak from the practical view (practical points of view). The effect size that is classified as medium (not too far from 0.15) is the influence of IWV on sharia GCG of 0.110. While the influence of IWV on SOV amounted to 0.573 and GCGS to FP 0.383, classified as having a large effect size because it was above 0.35. This means that IWV has an important role in the practical perspective of improving SOV. As well as sharia GCG, it certainly plays an important role in the practical perspective in increasing FP.

Furthermore, the fit model testing is carried out, with the help of WarpPLS 4.0 Program, the fit index can be obtained as follows:

Tabel 4.7. *Model fit and quality indices*

Model fit and quality indices ----------------------------- Average path coefficient (APC)=0.394, P<0.001 Average R-squared (ARS)=0.361, P<0.001 Average adjusted R-squared (AARS)=0.341, P<0.001 Average block VIF (AVIF)=1.124, acceptable if <= 5, ideally <= 3.3 Average full collinearity VIF (AFVIF)=2.138, acceptable if <= 5, ideally <= 3.3 Tenenhaus GoF (GoF)=0.501, small >= 0.1, medium >= 0.25, large >= 0.36 Sympson's paradox ratio (SPR)=0.800, acceptable if >= 0.7, ideally = 1 R-squared contribution ratio (RSCR)=0.993, acceptable if >= 0.9, ideally = 1 Statistical suppression ratio (SSR)=0.800, acceptable if >= 0.7 Nonlinear bivariate causality direction ratio (NLBCDR)=0.800, acceptable if >= 0.7

Source: processed data

Fit index output shows that the model has a good fit. Output shows that the goodness of fit model criteria have been fulfilled with APC value = 0.394, ARS = 0.361, AARS = 0.341 with a significance value of p <0.001 (<0.05). Likewise, the average block VIF (AVIF) value = 1,124 and Average full collinearity VIF (AFVIF) = 2,138, which is less than 3.3 (meeting ideal standards). This means that there is no multicolonity between indicators and between latent variables. The GoF produced is 0.501> 0.36, which means that the model's fit is very good. For Sympson's paradox ratio (SPR) = 0.800, R-squared contribution ratio (RSCR) = 0.993, statistical suppression ratio (SSR) = 0.800 and nonlinear bivariate causality direction ratio (NLBCDR) = 0.800. Each has a value of ≥ 0.7, which means there is no problem of causality in the model. This research was conducted iterations three times using the resampling (bootstapping) method of 300 samples.

4.4 Testing of Hypotheses

1. Islamic work values have a positive and significant effect on SOV. It is proven by β of 0.74 and the significance value of p value <0.01. Because the value of p value is much smaller than the critical value of 0.05 (5%), it is

proven statistically that Islamic work values have a positive and significant effect on SOV. By implementing Islamic work values, individuals will grow awareness to carry out their duties as caliphs in the face of the earth as spreading goodness fairly and responsibly to all stakeholders. The practice of Islamic values applied in work provides the basis for achieving social justice. Likewise, for companies that have implemented a comprehensive and institutionalized Islamic work value will guarantee the creation of justice for all stakeholders. Companies not only focus on creating value for shareholders, creditors, employees, and the government, but pay attention to those who do not contribute directly such as: the poor, neglected children, and Ibnu Sabail (Wulandari, 2010: 79).

2. Islamic work values have a positive and significant effect on Sharia GCG. It is proven by the estimated coefficient (β) of 0.33 and the significance value of p value <0.01. Because the value of p value is much smaller than the critical value of 0.05 (5%), it is proven statistically that Islamic work values have a positive and significant effect on Islamic GCG. The value of Islamic work that is applied in work becomes the basic foundation in the implementation of good Islamic corporate governance. To build the basic foundation, it should refer to the two principles, namely the principle of Shifat (shidiq, fathonah, amanah, and tabligh) and the principle of Tarik (transparency, accountability, responsibility, independence and fairness, and justice). Both principles reinforce each other to ensure sustainability in Islamic banking. According to Tikawati (2012), in principle, Islamic values are in line with the principles of GCG. Likewise, Nawatmi (2010: 53), states that the implementation of ethics in business and good corporate governance is one of the sustainable competitive advantages. Sternberg (1994), states that business ethics has a relationship with corporate governance. The urgency is that Islamic work values must be fully implemented so that the implementation of good sharia corporate governance can be maximally realized.

3. Testing of hypothesis 3 is done through two stages or paths of analysis, as follows:
(1) IWV has a positive and significant effect on sharia GCG. It is proven by the estimated coefficient value (β) of 0.33 and the significance value of p value <0.01.

(2) Islamic GCG pathway has a positive but not significant effect on SOV. It is proven by the estimated coefficient value (β) of 0.08 and the significance value of p value 0.16. Because the value of p value is far greater than the critical value of 0.05 (5%), the GCGS path to the SOV does not meet the established criteria.

In conclusion, that Islamic work values have no effect on Islamic GCG and have no implications for SOV. To test the mediating effect of sharia GCG, using SEM-PLS with the VAF (Variance Accounted For) method. VAF values obtained were 0.0344 (3.44%), less than 20% and said there were almost no mediating effects (Hair et al., 2013). Thus sharia GCG has almost no mediating effect. This means that Islamic GCG cannot be a mediator of the effect of Islamic work values on SOV.

The results of the study indicate that Islamic work values have not been fully implemented. Likewise, with the treatment of shareholders' rights, where the rights of minority shareholders are less protected. Informed in the study, Lukviarman (2016: 124), where conflicts of interest in Indonesia generally occur between majority and minority shareholders. Because the Islamic work value has not been fully implemented, the effect is very weak on SOV. Although the GCG score is good, it is not automatically responsible for stakeholders in the form of recognition, treatment, and protection of their rights can be done. If the conditions are so, then a long commitment and time are needed so that the Islamic value system can be applied in sharia banking operational activities.

4. Islamic work values have no effect on financial performance, as evidenced by the value of β of -0.17, and the significance value of p value is equal to 0.08. Because the value of p value is far greater than the critical value of 0.05 (5%), it is not proven statistically that Islamic work values affect financial performance. The implementation of Islamic work values in Islamic banking is still inadequate, so management has not been able to achieve good financial performance. Aggravated by poor macroeconomic conditions led to financial performance proxied by NOM, ROA, ROE, and BOPO, which decreased. The slowdown in business volume growth also occurred during the last three years until the end of 2014, which was 12% (Indonesian Islamic Banking Roadmap, 2015-2019). Other factors are the impact of the global economy (falling oil prices, high-interest rates) and national economic factors (weakening of the rupiah, inflation, declining credit growth).

The business sectors that are most in demand by BUS and UUS are: property, finance, and credit (Islamic Finance Outlook, 2015). While the property sector is currently experiencing serious problems because the increase in prices of building materials reaches 30% and labor wages reach 20%. Coupled with the cessation of government subsidies in 2015 related to site ownership, causing people's purchasing power to decline. In the financial sector, the relocation of subsidies greatly affects the banking sector, especially Islamic banking, in Indonesia. The effect of increasing fuel oil (BBM) contributes to the increase in NPF of Islamic banking. Where the banking NPF range reaches 8% -11%.

According to OJK (2016), there are seven strategic issues that help slow the growth of Islamic banking. These strategic issues, such as: inadequate capital, low efficiency, expensive funding costs that have an impact on the limitations of the financing segment. Other issues are non-varied products and services, inadequate quality and quantity of SDIs, and technology that does not support product and service development. Coupled with a low level of public awareness, including regulation and supervision that has not been optimal.

5. Testing of hypothesis 5 is carried out through two stages or paths of analysis, as follows:
(1) IWV has a positive and significant effect on sharia GCG. It is proven by the estimated coefficient value (β) of 0.33 and the significance value of p value <0.01.

(2) Islamic GCG pathway has a positive and significant effect on FP. It is proven by the estimated coefficient value (β) of 0.65 and the significance value of p value <0.01. Because the value of p value is far greater than the critical value of 0.05 (5%), the GCGS path to the FP meets the established criteria.

In conclusion, that Islamic work values have a positive and significant effect on Islamic GCG and have implications for FP. To test the mediating effect of sharia GCG, using SEM-PLS with the VAF (Variance Accounted For) method. VAF values of 4.8202 (482.02%) were obtained, more than 20% and were said to have full mediation effects (Hair et al., 2013). This means that financial performance (FP) can be achieved if Islamic banking in Indonesia can carry out Islamic work values as a whole in its operational activities through the implementation of sharia GCG. The better Islamic work values are implemented in Islamic banking through the implementation of Islamic GCG, the greater the company's ability to achieve financial performance.

The inadequate implementation of Islamic work values in Islamic banking has made the basic foundation of Islamic GCG not solid so that the orientation of Islamic banking prioritizes the interests of shareholders through achieving financial performance. Because the juridical purpose of Islamic banking is oriented to increasing value for shareholders (Tikawati, 2012) through the achievement of financial performance.

The same opinion is explained by Zali and Ismail (2014: 1219), currently, the orientation of Islamic banking is the fulfillment of the interests of shareholders. Although Jensen and Mecling (1976) specifically do not examine Islamic banking, but his research confirms that the application of GCG is still oriented to maximization of shareholders wealth (maximizing shareholders' wealth). Especially for countries that adhere to the American model like in Indonesia. Where the model tends to be in the effort of maximization of shareholders values, thus triggering conflicts of interest and sacrificing the rights of other stakeholders. According to Freeman (1984) and Blair (1995), the implementation of GCG is still not oriented towards maximizing the interests of stakeholders. Even research Abbasi et al. (2012) link Islamic work ethics with efforts to achieve value maximization that is oriented to the creation of shareholders' wealth which is characterized by increased financial performance in Islamic banking.

5. CONCLUSION

The test results show that Islamic work values have a positive effect on SOV. Likewise, Islamic work values have a positive effect on sharia GCG. While Islamic work values have no positive effect on sharia GCG and have no implications for SOV. Likewise, Islamic work values do not have a positive effect on financial performance. While Islamic work values have a positive and significant effect on sharia GCG and have implications for financial performance. There are two models in corporate governance, namely: Anglo-American corporate governance models and Franco-German corporate governance models. The tendency for Islamic banks to be similar to Anglo-American models. Where the orientation is more on fulfilling the interests of shareholders through achieving financial performance. If analyzed through the Franco-German model, the implementation of GCG has not implications for fulfilling the interests of all stakeholders. The number of samples in this study is very limited, where respondents are bank management, not respondents from outside the company who can represent stakeholders as users of banking products and services.

References

Harahap, Sofyan S. 2011. Business Ethics in Islamic Perspectives. Salemba Empat: Jakarta.

Financial Services Authority (OJK). 2014. Corporate Governance Roadmap in Indonesia.

Syakhroza Akhmad. 2003. Best Practices of Corporate Governance in the Context of Local Banking Conditions in Indonesia. USAHAWAN No. 06 Th XXXII.

Lukviarman, Niki. 2004a. Business Ethics Are Not Running In Indonesia: What Is In Corporate Governance? Business strategy journal. JSB No. 9 Vol. 2, December 2004. Page: 139 - 156.

Gilani, Hasan. 2015. Exploring the ethical aspects of Islamic banking. International Journal of Islamic and Middle Eastern Finance and Management. Vol. 8 No. 1, Page 85-98.

Sharia Bank GCG Reports for 2010-2014.

Sari, et al. 2013. Development of Islamic Banking in Indonesia: An Overview. Business Application Journal, Vol. 3 No. 2, April 2013

Ministry of Religion of the Republic of Indonesia: Population According to Religion in 2013.

Financial Services Authority (OJK). 2016. Indonesian Islamic Banking Roadmap 2015-2019. Islamic Banking Department.

Bank Indonesia Regulations. Number 11/33 / PBI / 2009 concerning Implementation of Good Corporate Governance for Sharia Commercial Banks and Sharia Business Units.

Bank Indonesia Circular Letter Number 12/13 / DPbS Year 2010 concerning Implementation of Good Corporate Governance for Sharia Commercial Banks and Sharia Business Units.

Syam, Dhaniel & Najda, Taufik. 2012. Analysis of the Quality of Implementation of Good Corporate Governance in Islamic Commercial Banks in Indonesia and Its Impact on the Rate of Returns and Risk of Financing. ISSN Accounting and Financial Review Journal: 2088-0685 Vol.2 No. 1, April 2012 PP 195-206.

National Governance Policy Committee. 2011. General Guidelines for Sharia Business Governance.

Abdus Sattar Abbasi, Kashif ur Rehman, Shakir Hussain Abbasi. 2012. Islamic Work Ethics: How They Affect Shareholder Value. ISSN 1013-5316; CODEN: 8 SCI SINT. Int. (Lahore), 24 (4), 521--530,2012.

National Committee on Governance. 2006. General Guidelines for Indonesian GCG.

Yunus, M.O, et al. 2012. Work Values and Organizational Commitments: A Case Study Among Employees in Broadcasting Industry. China-USA Business Review, ISSN 1537-1514 February 2012, Vol. 11, No. 2, 161-172.

Salem Z., O and Agil S., O., S. 2012. The Effects of Islamic Individuals' Ethics on Organizational Commitment of Employees in Libyan Public Banks. British Journal of Arts and Social Sciences ISSN: 2046-9578, Vol.9 No.I.

Nawatmi, Sri. 2010. Business Ethics in the Islamic Perspective. Economic Focus (FE), pp. 50 - 58 Vol. 9, No.1 ISSN: 1412-3851.

Sternberg, E. 1994, Just Business: Business Ethics in Action, Warner Books, London.

Khanifar Hossein, Matin Hassan Zarei, Jandaghi Gholamreza, Gholipour Aryan, Hassanzadeh Mohammad Hassanzadeh. 2011. Identifying the Imensions and Components of Islamic Work Values (IWV) for Public services sector of Iran. European Journal of Social Sciences - Volume 22, Number 2.

Cahya, Bayu Tri. Overview of Good Corporate Governance Policies in Sharia Banking in Indonesia. Islamic economic journal. Volume VII, No. 1, July 2013.

Yunus, M.O, et al. 2012. Work Values and Organizational Commitments: A Case Study Among Employees in Broadcasting Industry. China-USA Business Review, ISSN 1537-1514 February 2012, Vol. 11, No. 2, 161-172.

Abdus Sattar Abbasi, Ghulam Mustafa Mir, Muzammil Hussain. 2010. Islamic work ethics: How they affect organizational learning, innovation and performance. Accepted by APE, ISI indexed Impact Factor Journal.

Indrawati, Nur K. 2008. Best Practice of Good Corporate Governance in Islamic Financial Institutions (Islamic Banks). Journal of Management Applications Vol. 6 No. December 3, 2008

Sabir, et all., 2012. Impact of Corporate Ethical Vaulues on Ethical leadership and Employee Performances. International Journal of Business and Social Science Vol. 3 No. 2 [Special Issue - January 2012].

Sutono and Budiman, Ali, Fuad. 2009. Effect of Islamic Work Ethics and Leadership on Employee Performance at the Financial Services Cooperative at Syari'ah Baitulmaal Wat Tamwil in Rembang District. Management Analysis Vol. 4 No. December 1, 2009 ISSN: 1411-1799.
Muafi. 2003. Effects of Employee Spiritual Motivation on Religious Performance: Empirical Study in Surabaya Rungkut Industrial Area (SIER). JSB No. 8 Vol. 1 (2003) pg. 1-18.
Wibisono, C. 2010. Influence of Faith on Apostles Against Religious Performance. Journal of Economics, Vol. 13, No. 4.
Amaliah, I, Julia, A and Riani, W. 2013. Effects of Islamic Values on Work Performance. MIMBAR, Vol. 29, No. 2.
Galbreath Jeremy. 2006. Does Primary Stakeholders management Positive Affect The Bottom Line? Some Evidence From Australia. Management Decision Vol 44 No. 8, 2006. Pp.1106-1121. Emerald group publishing Limited 0025-1747 DOI 10.1108 / 00251740610690649.
Ghaffar Aimen. 2014. Corporate Governance and Profitability of Banks Operating Islamic in Pakistan. Interdisciplinary Journal of Contemporary Research In Business. June 2014 Vol 6, No. 2.
Mousavi, et al., 2012. Relationship between board characteristics and performance: Evidence from Tehran stock market. African Journal of Business Management Vol.6 (31), pp. 8994-9004.
Aggarwal Priyanka. 2013. Impact of Corporate Governance on Corporate Financial Performance. Journal of Business and Management IOSR (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 13, Issue 3 (Sep. - Oct. 2013), PP 01-05.
Financial Services Authority Regulation (POJK) Number 8 / POJK.03 / 2014 concerning Soundness Rating for Sharia Commercial Banks and Sharia Business Units. Promulgated in Jakarta on June 13, 2014.
Financial Services Authority Circular Number 10 / SEOJK.03 / 2014 Concerning Soundness Rating of Sharia Commercial Banks and Sharia Business Units.
Bank Indonesia Regulations. Number 9/1 / PBI / 2007 concerning the Rating System for Commercial Banks based on Sharia Principles.
Bank Indonesia Circular Letter No.9 / 24 / DPbS / 2007 Concerning the Rating System for Commercial Banks Based on Sharia Principles.
Ghozali Imam. 2014. Structural Equation Modeling Method Alternative with Partial Least Squares (PLS). Undip Faculty of Economics Publishing Board: Semarang.
Sholihin M. and Ratmono D. 2013. Analysis of Structural Equation Modeling Partial Least Squares (PLS) with Warppls 3.0 for Nonlinear Relations in Social and Business Research. CV. Andi Offcet: Yogyakarta.
Ghozali Imam and Latan Hengky. 2014. Partial Least Squares (PLS), Concepts, Methods, and Applications Using the Warppls 4.0 Program. Undip Faculty of Economics Publishing Board: Semarang.
Wulandari Anis. 2010. Responding to the Value of Justice (in the Islamic Sharia Perspective) contained in Good Corporate Governance. Journal of Investment Vol. 6 No. 2 p. 95-110.
Tikawati. 2012. Implementation of Good Corporate Governance in Islamic Financial Institutions (Islamic Banking). Journal of IAIN-Samarinda.
Hair, J., T. Hult, C. Ringle, and M. Startstedt. 2013. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Los Angeles: Sage.
Lukviarman, N. 2016. Corporate Governance Towards Conceptual Strengthening and Implementation in Indonesia. PT. Era of Adicitra Intermedia: Solo.
Indonesian Islamic Banking Roadmap, 2015-2019.
Islamic Finance Outlook, 2015
Zali, N. A and Ismail, A. G. 2014. The Creation of Corporate Ethical Identity from the Perspective of Intangible Assets. Middle-East Journal of Scientific Research, Page: 1219-1225, ISSN 1990-9233.
Jensen, M.C.and W.H. Meckling. 1976. "The Firm's Theory: Managerial Behavior, Agency Cost and Ownership Structure", Journal of Financial Economics 3 (4): 305-360.
Freeman, R.E. 1984. Strategic Management: A Stakeholder Approach. Pitman Publishing, Boston.
Blair, M.M. 1995. Ownership and Control: Rethinking Corporate Governance for the Twenty-first Century. The Brooking Institution. New York.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 418-430
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.98

Islamic Structured Products: Innovation or Replication? A New Discussion on Contemporary Application and *Shari'āh* Issues

Naeem Suleman Dhiraj[1], Moustapha Chora Ahmat[1], Ilhamiddin Ikramovich Nazarov[1], Muhamad Ikhwan Arif[1]

[1] Institute of Islamic Banking and Finance, International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia

Correspondence: Naeem Suleman Dhiraj, Institute of Islamic Banking and Finance, International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia, 53100. Email: dhirajnaeem@gmail.com

Abstract

Islamic structured products (Islamic SPs) are similar to conventional SPs, but with a difference that the former is *Shari'āh*-compliant; whereas, the latter is not. A question, therefore, arises whether Islamic SPs are a real innovation or a mere replication of conventional SPs. This paper juxtaposes Islamic SPs with the conventional SPs and critically examines the concept and current practices of the Islamic SPs by Islamic banks. The paper adopts a qualitative method to analyze the related literature thoroughly and discusses *Shari'āh* contracts employed in structuring Islamic SPs. The research finds that the Islamic SPs are designed to merely meet the growing *Shari'āh*-observant investors' needs without due consideration to the higher objectives of Islam (*maqāsid al-Shari'āh*). The research also finds that notwithstanding Islamic SPs are *Shari'āh*-compliant, they are, however, an outright replication of the conventional SPs, which is more likable by the practitioners since it accrues less cost compared to inventing new SPs, which is more costly and time-consuming. It is, however, acknowledgeable that although a *Shari'āh*-compliant trademark is sufficient to continue doing Islamic banking business, the plethora of investment injected into the replicative SPs hardly manifest any contribution to the real economy, and is far-flung from the essence of Islamic banking and finance that advocates for economic justice, social impact, and financial freedom. Therefore, the research suggests that Islamic SPs be overhauled to inculcate the spirit of Islam in the Islamic banking business.

Keywords: Islamic Structured Products, *Shari'ah* Contracts, Urbun, Amalgamation, Economy

1. Introduction

1.1 Background of the study

Islamic Structured Products (ISP) are proliferating in Islamic finance. In April 2006, the first Islamic dual currency structured investment product was approved under the guidelines on the offering of Structured Products (SP). SP was introduced in 1980 for the institutional investors only. Since 2006, it began to be offered to the retail investors where it is purchased during the initial offering. The value of SP is derived from the performance of various underlying assets such as stocks, index, commodity, interest rate, foreign currencies, or a combination thereof. Because of its multiple features, SP embraces various risks such as credit risk, liquidity risk, call risk, interest rate risk, foreign exchange rate risk, yield curve risk, and volatility risk (SLCG 2009).

SP is an investment whereby its repayment is derived from the development of its underlying assets. The repayment structure of SP is different from ordinary products such as shares, bond, and bank deposits. It is based on the performance of the underlying assets. Such assets are often combinations of traditional securities such as equities, commodities, bonds, and one or more derivatives components (Vanini and Pohl 2015). An SP can be defined as a security, which possesses bond-like elements and resembles derivative instruments.

The volume of SP offered in Asian Market, including Singapore, South Korea, Japan, Hong Kong, and China, have exceeded USD750 billion (CFA Institute Research Foundation, 2015). Japan was home for the biggest stock exchange in Asia and the third largest in the world contributing to the sale of SP of more than USD 570 billion at the end of 2015 (Wu and Pitts 2017). Vanini and Pohl (2015) conclude that between the periods of 2012 to 2014, at least 80% of the SP performed well and generated a positive return. These products generated a median return of 5% to 15% per annum depending on their category and year. In the year 2017, 13,490 SPs were issued in the market with a total notional value of approximately USD 50.2 billion; whereas, in 2016, only 9,362 SPs were issued (Morrison and Foerster 2018). 72% of the issuance comes from Equity indexes such as stock (11.88%), ETF (6.42%), and the basket of Stocks (3.69%). Wu and Pitts (2017) highlight the advantages of SPs offered to investors. These advantages are tax efficiency, currency protection, leverage, transparent pricing, and complexity. Looking at the demand and necessity of SPs, Islamic scholars innovated and devised the Islamic SPs (ISPs) to satisfy the growing needs for ISPs among the *Shari'āh* observant investors. Fundamentally, ISPs have similar mechanisms as the conventional SPs except that the ISP employs the permissible *Shari'āh*-compliant contracts. In ISPs, the contracts must adhere to the *Shari'āh* principles and avoid the prohibited elements such as *ribā* (interest), *gharar* (uncertainty), and *maysir* (gambling) (Rahman & Kassim, 2017).

Since the Islamic SPs stems out of the conventional SPs, the real question that arises here is whether the Islamic SPs are a real innovation by the Islamic scholars or a mere replication of conventional SPs? This paper, therefore, attempts to answer this question in the light of the *Shari'āh*. The opinions of the prominent *Shari'āh* scholars have been analyzed about the Islamic SPs. The paper discusses both the conventional and the Islamic SPs to develop a robust understanding of its process flow. After that, it discusses the *Shari'āh* issues on the Islamic SPs and provides resolutions in the view of the esteemed *Shari'āh* governing authorities such as Accounting and Auditing Organization of the Islamic Financial Institutions (AAOIFI) and various others.

2. Problem statement

Hitherto, Islamic SPs has not received adequate attention from the industry practitioners and academicians. This is evident from two dimensions. First, there is a dearth of literature about the discussion of and deliberation on Islamic SPs, which means that it is not popular enough to be widely discussed in the literature. Second, the fact that Islamic banks are offering limited SP investments such as Interest rate-linked, Equity-linked, and FX-linked Islamic SPs, manifests the procrastination in the development of the Islamic SPs. Besides that, there are various issues in the prevailing Islamic SPs such as interest rate benchmarking, the amalgamation of contracts, and leveraging. Most importantly, Islamic SPs are regarded by many as a mere replication of the conventional SPs where the prevailing Islamic SPs are designed to take advantage of the so-called Muslim market and that it is far away from its attempt of achieving the higher objectives of Islam vis-a-vis *maqāsid al-Shari'āh*. These issues ought to be addressed because not addressing them will only cast skepticism not only on the Islamic capital market, instead, on the Islamic finance industry as a whole. The indecisiveness of the matter will only add more confusions to the prevailing perplexities. Thus, this research embarks on to critically analyze the prevailing Islamic SPs and the underlying *Shari'āh* contracts, subsequently, examining the conventional SPs to perform a comparative analysis. It is hoped that the discussion will help decipher the above-deliberated issues, hence, deriving robust conclusive remarks.

3. Research objectives

The purpose of this study is to critically examine and explore the concept of Islamic SPs (ISPs) and its current practices in Islamic banks. Hence, the objective is:

1. To identify whether or not the Islamic SPs are a result of the scholar's innovation.
2. To examine the similarities and differences in Islamic SPs and conventional SPs.
3. To explore *Shari'āh* issues within the Islamic SPs and its resolution.

4. Research questions

Islamic SPs are under constant criticism by many *Shari'āh* scholars, industry practitioners, and academicians. As such, this research attempts to answer the following questions:

1. Are the Islamic SPs a result of Islamic scholar's real innovation, or is it a replication of its conventional counterpart?
2. If it is a replication then what is the way forward?
3. Do Islamic SPs truly conform to the *Shari'āh* principles, or is it a legal stratagem to fulfill the growing investors' demand?
4. What are the *Shari'āh* issues with the Islamic SPs?

5. Methodology

This research aims to expound on a thorough explanation of the conventional and Islamic SPs. To do that, the study employs a descriptive analysis approach to deliberate on the conceptual comprehension of the SPs. The primary source of data gathering is from the current works of literature, library research, and scholarly databases such as Ebsco, Scopus, Google Scholar, ProQuest, and Directory of Open Access Journals (DOAJ). Besides that, the study collects data from the prominent Malaysian Islamic banks such as HSBC Amanah, CIMB Islamic, Bank Muamalat, and Maybank Islamic to scrutinize the Islamic SPs offered by these Islamic financial institutions.

6. Limitations of the study

Islamic SP is a relatively new phenomenon in the Islamic capital market. It has yet to evolve and retains a plethora of potential for further development. However, for the time being, the study notices a lack of literature, and therefore, the study may have fallen short in addressing some of the prevailing and perhaps potential issues on Islamic SPs. As such, the researcher requests the academicians to enhance this study further. More importantly, despite the dearth of literature, this research was not adversely affected and yields staunch conclusive results.

7. Literature review

7.1 Conventional and Islamic SPs

According to Bullard (2015), SPs can be broadly defined as a pre-packaged product based on a series of derivatives. Investors can get exposed to a range of different underlying assets such as single stock, a basket of stocks, indices, commodities, debt, and forex. According to BNP Paribas, SPs are "a savings or investment products where the return is linked to an underlying asset with pre-defined features such as maturity date, coupon date, and capital protection level." According to Druilhe (2016), the SPs is packaged using three main components bond, one or more underlying assets, and financial instruments linked to the underlying assets. Securities Industry Development Corporation (SIDC), in its training notes, defined the term "SPs" as financial products created by financial institutions specifically for their institutional and individual clients. It has a risk and reward profile designed to achieve a specific set of objectives. SPs are hybrid investments that combine traditional security with one or more asset classes into a single structure. In Malaysia, according to the Guidelines on Unlisted Capital Market Products under the Lodge and Launch Framework (LOLA), SP means any investment product that falls within the definition of "securities" under the Capital Markets and Services Act 2007 (CMSA), which derives its value by reference to the price or value of an underlying referred asset. The underlying asset encompasses security, index, currency, commodity, other assets, or a combination of such assets (SIDC, 2015). Hasan (2010) summarizes that no single definition can undoubtedly cover the full spectrum of SPs. However, it could be defined as investment products that neither resembles any particular asset class nor any standardized financial instrument. It is a refined product designed and synthesized to meet the specific needs of clients. According to the Securities Commission (SC) Malaysia, there are 69 SPs that has been lodged in Malaysia by various banks. From the total 69 SPs, six of them are Islamic SPs (Securities Commission (SC) Malaysia, 2019). Below is the list of the six Islamic banks in the lodgment listing.

Table 1: Islamic SPs in SC's lodgment listing

Issuer Bank	Name of SP Programme	Size (RM Billion)	Lodgement Date	Expiry Date
RHB Islamic Berhad	Islamic SP Programme 1	5	19 Aug 2015	18 Aug 2018
HSBC Amanah Malaysia Berhad	Islamic Structured Investments Linked to Multiple Assets	5	14 Jan 2016	13 Jan 2019
Bank Muamalat Malaysia Berhad	Islamic Structured Investment Products Program	0.05	5 Jan 2018	4 Jan 2021
CIMB Islamic Bank Berhad	Islamic SP Programme-2	5	23 Apr 2018	22 Apr 2021
RHB Islamic Bank Berhad	Islamic SP Programme 2	5	10 Aug 2018	9 Aug 2021
Hong Leong Islamic Bank Berhad	Islamic SP Programme	5	10 Oct 2018	9 Oct 2021

Source: Securities Commission (SC) Malaysia

Islamic SPs are gaining popularity among investors since it is *Shari'āh*-compliant. It caters for those investor base that are willing to diversify their portfolios. It is noteworthy that, having fundamentally similar mechanisms as the conventional SPs, the Islamic SPs use only the permissible *Shari'āh*-compliant contracts (Rahman & Kassim, 2017). Hassan (2010) highlights that the most crucial element in designing the Islamic SPs lies within the nature of the contract. Similarly, Islamic SPs must adhere to the fundamental guidelines in Islamic finance such as being free from *ribawi* elements, features resembling *gharar*, and must be fair and just to the parties in the contract.

It utilizes sale-based *Shari'āh* contracts such as *murābahāh* or *tawarruq*, participatory contracts such as *mudārabāh* and *mushārakāh*, and agency contracts such as *wakālāh bi al-istithmar*. Additionally, the contract of promise such as *wa'ād* and *urbun* is also widely practiced to provide exposure to certain underlying assets. Furthermore, *Shari'āh*-compliant SPs began to emerge in 2007 whereby Maybank Islamic issued its first commodity-linked Islamic SP named 'Maybank Structured Islamic Deposit (Stride-i). Islamic banking and finance emerged as an alternative to conventional interest-based banking. The essence of Islamic banking stems out from the prohibition of the most fundamental elements such as interest (*ribā*), speculations (*gharar*), and gambling (*maysir*). In conventional banking, SPs exists as a specialized financial instrument to cater to the unique financing needs of the investors, which otherwise would not be met by the general investment instruments. With investors resorting to conventional banks to benefit from the SPs, a necessity arose to develop *Shari'āh*-compliant structured investment products to meet the investors' unique needs (HSBC Amanah). In an empirical study on *Shari'āh*-compliant structured investment products, Rahman & Kassim (2017) confirms the necessity to device *Shari'āh*-compliant structured investment products that can meet the investors' needs for their portfolio diversification. In Islamic structured investment products, the value of the product is determined by the underlying asset. Hasan (2010) defines an underlying asset as "any security, index, currency, commodity, or other assets or combination of such assets" (p.191). Demonstrating the peculiar features of the Islamic SPs, Firoozye (2009) acknowledges that Islamic structured investment products provide a rewarding yet leveraged return. In other words, although these products fundamentally function on the normative high-risk high-return theory, it has been successful in safeguarding the investors' capital. Furthermore, Dar (2018) states that it is challenging to meet the ever-evolving and diverse investors' demands through traditional financial products accessible in the financial market. Hence, it is imperative to innovate financial products that comply with the principles of *Shari'āh*, hence, providing investors a sustainable alternative. As has been established thus far, Islamic Structured Investment Products strictly inculcates the rulings and principles of *Shari'āh*. This is what primarily differentiates Islamic structured investment products from conventional SPs. However, besides this distinction, the mechanisms for designing Islamic SPs remains to be the same as the conventional ones (Rahman & Kassim, 2017, p.169). Nevertheless, the distinction mentioned above should not be undermined as Islamic banking and finance operates within the ambit of *Shari'āh*, wherein the former and the latter remains perfectly interlocked.

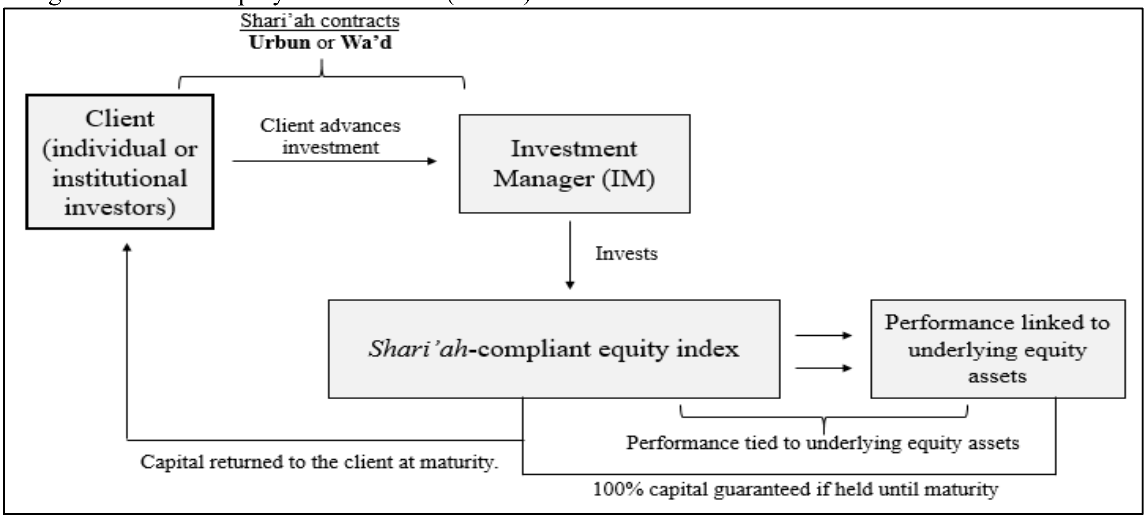
8. Findings and Discussion

8.1 Islamic Equity-Linked Notes (ELN-i)

This is the most commonly used Islamic structured investment product in the Islamic financial market. Similar to the conventional ELNs, the performance of the Islamic ELN is directly linked to the performance of the underlying *Shari'āh*-compliant asset class. This asset class may constitute a single *Shari'āh*-compliant stock, a pool of *Shari'āh*-compliant stocks, or an entire Islamic equity index (International Shari'ah Research Academy [ISRA], 2015). An index comprises of a cluster of stocks, and therefore the index tracks the performance of the underlying stocks. Meaning, the performance of the index is directly linked to the performance of the underlying stocks. So, if the performance of the index rises, it is said to be having an uptrend and vice versa. For example, if an index generates a 5% rate of return (ROR), it means that the underlying stocks have also generated an average ROR of 5%. This type of ELNs is most suitable for those investors that aim to generate a return by investing their capital in equity-based indices while exposing their investment to a regulated risk. As for the *Shari'āh* contracts, each Islamic financial institution uses different *Shari'āh* contracts depending on the investors' risk profile and investment needs.

Figure 1 depicts the modus operandi of the Islamic Equity-Linked Notes (ELNs-i). The client, which can be an individual or perhaps an institutional investor, seeks out the optimal *Shari'āh* contract such as *urbun* or *wa'ād* for investment purposes. After that, the client advances the investment funds to be invested in a *Shari'āh*-compliant equity index. At the end of the investment period, the capital is returned to the client. It is to be noted here that, the *Shari'āh* consultants thoroughly screen the equity index according to the *Shari'āh* screening guidelines. FTSE Russell, for example, is one of the prime global *Shari'āh* equity index. Some other indices are S&P 500 *Shari'āh*, Russell Jadwa *Shari'āh* Indexes, Dow Jones Islamic Market (DJIM) Index, MSCI Singapore IMI Islamic, FTSE Bursa Malaysia, and Edbiz NASDAQ-100 *Shari'āh* (ISRA, 2015).

Figure 1: Islamic Equity-Linked Notes (ELN-i)



Source: Author

8.2 Interest Rate-Linked Notes (IRLNs)

In conventional banking, interest rate-linked notes are a type SPs where the performance of the instrument is dependent upon the underlying interest rate index usually linked to the KLIBOR. This type of investment instrument provides "some credit protection" (ISRA 2015, p.675). HSBC Amanah offers an Islamic interest-rate linked Islamic SP. The product is HSBC Amanah Principle protected Range Accrual Interest Rate Linked SP. As the name implies, the product offers a capital guarantee if held until maturity while earning a "regular profit payment higher than fixed deposit" (HSBC Amanah). CIMB Islamic offers an interest rate-linked Islamic structured investment product which is a 7-Year Callable Islamic Range Accrual NID-i. To reiterate, the performance of this class of SP is linked to the interest rate. Although the words "Islamic" and "interest-rate" might seem oxymoronic, the necessity of having a full-throated Islamic banking system gave rise to the fixed income instruments despite being frowned by the *Shari'āh* (Bennett, 2011). Rigorous financial engineering went underway to device Islamic structured instruments so that it provides fixed-returns to the investors while remaining within the ambit of *Shari'āh*.

The differences between conventional and Islamic SPs can be seen in the contracts employed by Islamic banks. Although Islamic banks benchmark the Islamic SP against the interest rate, they, however, use *Shari'āh* contracts such as *wakalah bi al-istithmar*, *wa'ād*, commodity *murābahāh*, and commodity *musāwamāh* (HSBC Amanah). These are the most widely used *Shari'āh* contracts. It is noteworthy that the underlying assets within the Islamic SP is *Shari'āh*-compliant even though the performance of the same product is linked to the interest rate or KLIBOR. Similarly, evaluating the issues in Islamic SPs, Hasan (2010) argues that since the LIBOR is being used for price determination then "there should not be any *Shari'āh* issues in using the index in this manner, even if the index is not *Shari'āh* index" (p.204). Interest rate-linked notes work the similar way as the equity-linked notes except that the former is linked to the market interest rate while the performance of the latter is dependent on the equity index.

8.3 Commodity-Linked Notes

Another type of Islamic SP is a commodity-linked note (CLN). The return is linked to the performance of a commodity or basket of commodities over a specified period. Investors will get the initial principal amount plus a return (if any) based on the percentage of change in the underlying commodity. The only difference between CLN applied in Islamic with its conventional counterparts is the commodity to be used has to be *Shari'āh*-compliant (ISRA 2015).

8.4 Bond-Linked Notes

As the name implies, it is a type of SP where the coupon is tied to the performance of the underlying bond. Investors of bond-linked notes (BLNs) are exposed to the issuer's credit risk. It offers attractive yields in a stagnant or bullish market. Nonetheless, investors may suffer a loss resulting from the unwinding of the BLN before the maturity date. In Islamic SPs, its performance may be linked to sukuk indices (ISRA, 2015).

8.5 Credit-Linked Notes

A few notable scholars have ruled out the permissibility of the credit-linked notes (CLN). It is because its mechanism is perceived as betting against the capability of a particular issuer to pay in certain circumstances, depending on the default of individual entities. CLN is a type of SP where the principal repayment and coupons are tied to the creditworthiness of the issuer and a third party which is also known as the reference entity. During the life of the CLN, investors receive regular coupons. At maturity, investors will receive the principal repayment provided that the reference entity does not experience a credit event during the life of the CLN. A credit event is an event which triggers settlement under the credit default swap (CDS) contract.

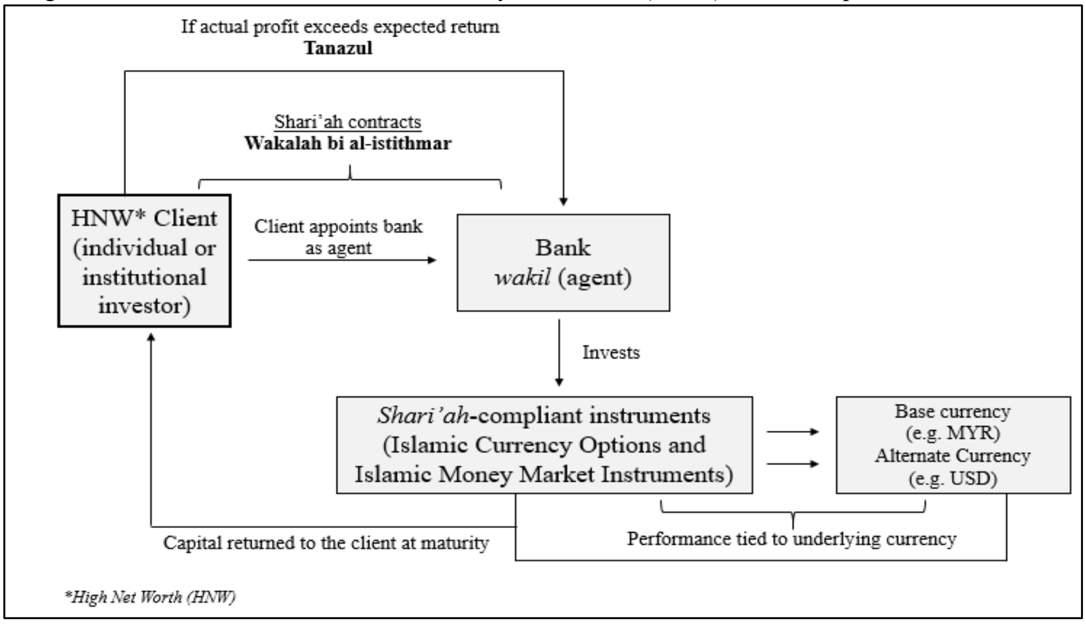
If the issuer faces a credit event, the investor receives a bond issued by the reference entity at a value less than the principal invested. Typically, a CLN is a note with a credit default swap (CDS) where the issuer sells the CDS to the bank and receives an annual fee which is then used to pay investors of the CLN (ISRA, 2015). In case the issuer cannot pay the investors, the CDS also allows the bank to transfer the risk of default on the note back to the issuer. It is because of this reason the scholars do not allow CLN to be applied in Islamic SPs.

8.6 Islamic FX-Linked Notes

Similar to other Islamic SPs, this type of product also offers a capital guarantee on a condition that the product is held until maturity or call. The return on this product is linked with "a single foreign currency, a basket of foreign currencies, or FX futures". Unlike other SPs, Islamic FX-linked notes are not immune from criticism of its existence. Scholars differ in their opinion regarding this product. The scholars against this product argue that since this SP is linked with the currency, hence it violates the basic principles of currency such as "medium of exchange, store of value and unit of measurement" (ISRA, 2015, p.675).

For example, RHB Islamic bank in Malaysia offers 'Dual Currency Investment-I (DCI-i)' using the *Shari'āh* contract of *wakālāh bi al-istithmar* (agency contract for investment). RHB Islamic bank indicates that the capital in this investment is not guaranteed; neither protected by Perbadanan Insurans Deposit Malaysia (PIDM). Figure 2 depicts the process flow of a currency-linked Islamic structured investment. A High Net Worth (HNW) client appoints the bank as an agent under a *wakālāh bi al-istithmar* contract between the client and the bank. The bank, as a wakil, pursues investment in *Shari'āh*-compliant instrument which could be Islamic currency options or Islamic money market instruments. Performance of the product is linked to the underlying currency, which is chosen upfront by the client. The bank will determine the profit based on the weaker currency at maturity as stipulated in the terms and the conditions. After that, at the maturity or call, the capital will be returned to the client along with the profit. However, if the actual profit exceeds the expected return, the client agrees to *tanāzul* (waives the right to) of the excess profit. In other words, the client agrees that the bank will retain any excess profit above the expected return.

Figure 2: RHB Islamic Bank's Dual Currency Investment (DCI-i) structured product



Source: RHB Islamic PDS; Diagram: Author

8.7 Islamic SP models

Essentially, there are two stages involved pertaining to the Islamic SP models. First, the channeling of proceeds, and second, the investing of the proceeds. The underlying contracts in the proceeds stage involves *wakālāh* or *mudārabāh* contracts while the investment stage involves contracts based on *murābahāh*, *tawarruq*, *urbun* or *wa'ād*.

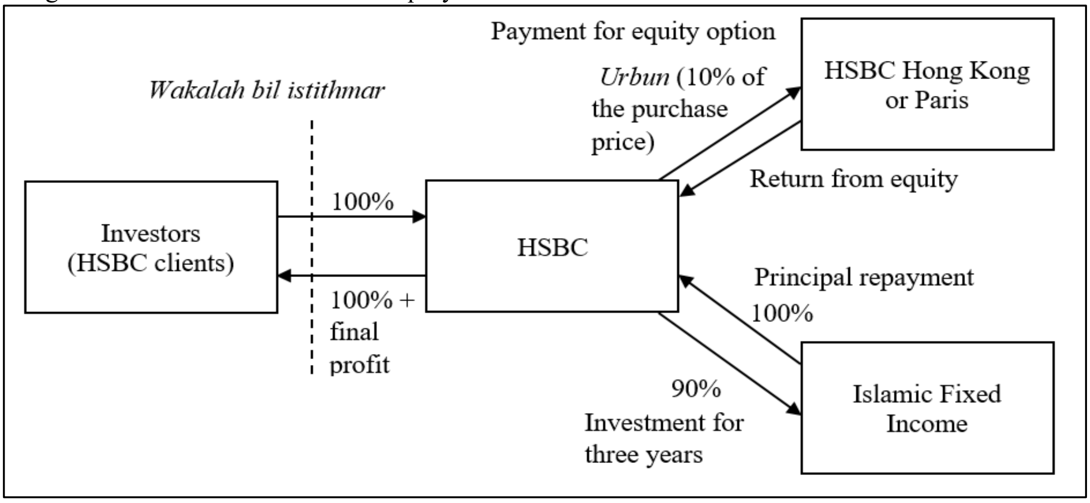
In the first stage, either a *wakālāh* contract is used or a *mudārabāh* for the collection of the proceeds through the sale of Islamic SPs. *Wakālāh* contract is used in the form of *wakālāh bi al-istithmar*, in which, the investor acts as a principal (*muwakkil*) and assigns the issuer/manager as the agent (*wakil*); whereas, in a *mudārabāh* contract, the investor acts as a capital provider (*rabb al-māl*), and the agent acts as an investment manager (*mudarib*) to invest the proceeds in the Islamic SPs. Furthermore, the primary feature of conventional SP is the guarantee of the capital, which is a similar approach adopted by Islamic SPs. Hence, in most structures, a *tawarruq* arrangement is employed to manage the more significant portion (usually 90%) of the proceeds by investing in less risky assets while the other 10% of the proceeds are invested in a profit-maximizing portfolio using the *urbun* contract. This is to ensure the capital is preserved and guaranteed by the investment manager. The contract of *wa'ād* is also used in this stage to structure Islamic SPs.

8.8 Urbun Model

The concept of *urbun*, as mentioned earlier, is employed for investing the smaller portion (i.e., 10%) of the proceeds. Urbun can be defined as earnest money paid by the buyer to the seller in order to secure the purchase of a particular asset in an exchange contract. The paid *urbun* is considered part of the price if the buyer opts or decide to continue with the contract (ISRA, 2015). However, if the buyer chooses to cease the contract, the *urbun* amount may be forfeited vis-a-vis rendered non-refundable at the option of the seller. In conventional SPs, the call option is employed for the smaller portion of the proceeds.

Similarly, in Islamic SPs, the concept of *urbun* is used to for the same reasons as that in conventional. However, the former is impermissible for being conventional, whereas the latter is permissible for being *Shari'āh*-compliant. This concept is discussed in details in the *Shari'āh* issues and solutions section of this paper.
Furthermore, in Malaysia, there are two Islamic SPs that adopts the *urbun* model. First, HSBC Amanah Islamic Equity-Linked Structured Investment-i; and second, Islamic All-Starts Restricted Mudharabah Structured Investment-i. The former refers to purchasing the equity option while the latter refers to purchasing the index. The HSBC Amanah Islamic Equity-Linked Structured Investment-I figure provided below depicts the example of based on the *urbun* model.

Figure 3: HSBC Amanah Islamic Equity-Linked Structured Investment-i



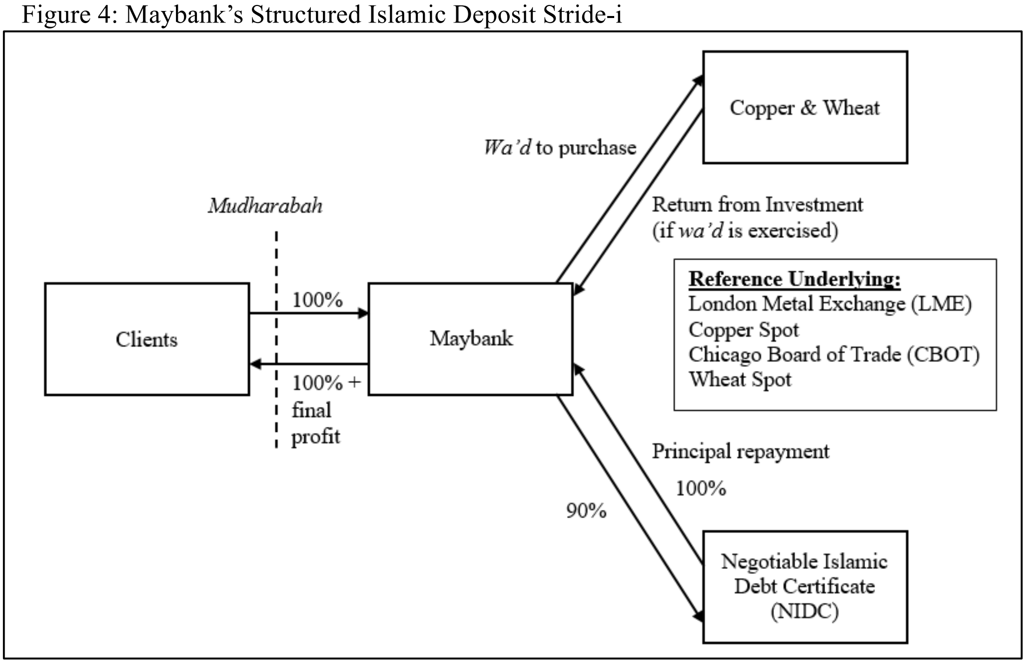
Source: ISRA, 2015, p.679

The portion of 10% of the proceeds is invested in HSBC Hong Kong or Paris by purchasing *Shari'āh*-compliant equities. HSBC pays 10% of the purchase price of equities and deems it as earnest money (*urbun*). If HSBC decides to continue with the investment, the *urbun* will be considered as part of the purchase price. However, if HSBC decides not to continue the investment at the maturity date, the *urbun* will be forfeited and is not refundable. HSBC's decision will be based on the performance of the equity option.

8.9 Wa'ād model

Another concept used for investing the smaller portion of the proceeds is through purchase undertaking (*wā'ad*). The structure is quite similar with previous *urbun* model. The difference exists only in the profit maximization portfolio whereby the investment manager enters into an unconditional and irrevocable purchase undertaking (*wā'ad*) to purchase the Islamic asset such as copper or wheat using the portion of 10% of the proceeds at a specific sale price upon maturity (ISRA, 2015). An example of Islamic SP using the concept of *wā'ad* is Maybank's Structured Islamic Deposit Stride-i, which is depicted in figure 4.

Figure 4: Maybank's Structured Islamic Deposit Stride-i

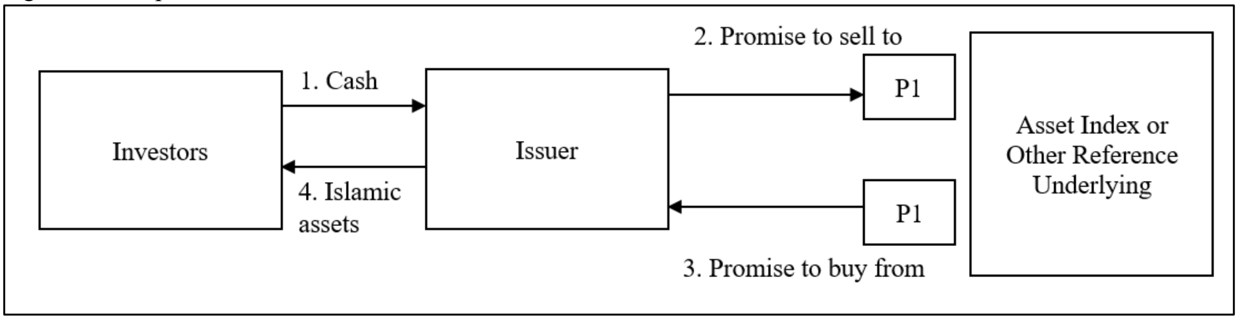


Source: ISRA, 2015, p.679

8.10 Wā'adān model

The third model in Islamic SPs is applying two unilateral promises (*wā'adān*). In this model, the capital is protected by closely monitoring the performance of the underlying asset or index and ensuring that it will not fall below the capital invested amount (ISRA, 2015). Figure 5 below illustrates the mechanism and workflow of the *wā'adān* model.

Figure 5: An operational flow of *wā'adān* model



Source: ISRA, 2015, p.681

The following steps further describe the process flow of the *wā'adān* model.

1. Investors place the proceeds with the issuer and appoint the issuer as an agent to purchase *Shari'āh*-compliant securities. The issuers will hold the securities for the benefit of the investors.
2. The issuer then enters into unilateral binding purchase undertaking (first *wa'ād*) which promise P1 to sell the underlying assets at a specific sale price upon maturity (or at any conditions stipulated).
3. Concurrently, P1 enters into unilateral binding purchase undertaking (second *wa'ād*) which promise the issuer to buy back the underlying assets at a specific sale price upon maturity (or at any conditions stipulated). This event or conditions shall not be similar to the earlier purchase undertaking. Only one of the undertakings will be exercised at maturity.
4. At maturity, the contract will be concluded, and the securities will be sold to P1, upon exercise of first *wa'ād* or second *wa'ād*.
5. The proponents of this model justify that the two undertakings (*wa'ād*) are not inter-conditional between each other. However, the opponents believe that the substance of the model seems to be fictitious, which might expose itself to bilateral purchase undertaking (*muwā'adāh*).

9. *Shari'āh* issues and solutions

9.1 The usage of conventional indices

The economic effects of both conventional and Islamic SPs may be similar to each other. While Islamic SPs differ from the conventional SPs in terms of mechanism and the contracts being used, the usage of the conventional index in Islamic SPs remain a contentious issue among the Islamic scholars. The index has its calculation methodology and is usually expressed in terms of a change from a base value. The most eminent indexes are the bond market index and the stock market index.

According to Hasan (2010), there are several usages of the index:

1. Only for benchmarking prices: This is acceptable among the majority of contemporary scholars. The benchmarking is a small number and is non-objectionable from the view of the *Shari'āh*. Co-existence with well-developed conventional banks obliges Islamic Banks to use the interest rate as benchmarking until other alternative Islamic benchmarks can be established (Delorenzo, 2009; AAOIFI *Shari'āh* standard no. 27, section 5/2, 2017).
2. Urbun contract: Some Islamic SPs resort to the *urbun* contract to reproduce an option to buy a basket of shares in a specific index or to buy the whole index. According to majority jurists, the purchase of option is not valid due to underlying asset ownership. Meanwhile, Maliki jurists allow it. The AAOIFI *Shari'āh* standard no. 20, has formulated three sub-standards on the index as follows:
   - For transactions based on the mere rising and falling of an index: For example, one of the parties says to another that if the index rises to such and such level, then he is liable to pay the other party such amount. This is a type of gambling, hence prohibited.
   - For options contracts based on the movement of one of the indexes, and this is by agreement between the parties to the sale on purchase of the option. For example, if the index rises in this way then 'I will compensate you so much for each point.' Also, it is impermissible to deal with such option.

- For derivatives transactions based upon the movement of the indexes, and this is by agreement of the two parties to sell a deferred commodity for a deferred price. This is also not permissible to deal in derivatives.

Unfortunately, the benchmarking method is still in the developmental stage for the Islamic Financial System. Banks become a vital part of the government to control the monetary system in a country. An alternative benchmark could be established when the government's approach in managing monetary policy is based on a 100% Islamic economic system. A study conducted by Haron and Ahmad (2000) finds that the profit motive guides customers. If the profit rate of IBs is lower than conventional banks, Islamic banks will lose depositors. On the other hand, if the profit rate is higher than the interest rate, Islamic banks will lose clients/entrepreneurs, whereby they will avoid taking investment from Islamic banks. Due to such fierce competition of attracting more deposits from customers, Islamic banks are forced to use interest rate benchmark for pricing their products. Another research conducted by Hakan and Gulumser (2011) finds that any change in the interest rate affects not only the deposits and loans of conventional banks but also the Islamic banks. Hence, the Islamic financial industry must strive to overcome the criticism of using the interest rate as a benchmark and actively seek an alternative to the common controversial benchmarking mechanism.

9.2 Leveraging and mechanism to leverage

Leveraging is an investment strategy of using borrowed money – for the use of various financial instruments or borrowed capital –to increase the potential return of an investment (Hayes, 2019). It is impermissible to transact per the money leverage system. It amounts to a loan that brings benefit to the broker. It consists *ribā* because the broker is a mediator through whom the debtor takes the loans, and the broker benefits from such loan.

Additionally, for the Forex-linked Islamic SPs, it is essential to mention that doing business with the Forex system could potentially involve many violations of Islamic law such as the presence of *ribā*. However, if the company provides a system that is free from such violations and fulfills the condition of *sarf* (exchanging hand-to-hand) while conducting the transaction, then such transactions render permissible; otherwise, it will be impermissible (Islamweb, 2015). To a similar effect, Hasan (2010) highlights that there should not be any *Shari'āh* compliance issue on leverage if a proper mechanism has been deployed. As long as the mechanism to raise extra money is acceptable and compliant according to the *Shari'āh* principles, the investor should be allowed to gain access to the upside performance of the fund.

9.3 Replicating conventional products

Shari'āh provides flexibility in the interpretation of the matters in question. The scope of the Islamic finance industry has significantly catapulted towards the conventional system. Various Islamic financing products have been successfully structured to perform and achieve similar functions as conventional instruments. Undoubtedly, the replication approach of conventional products was a necessity (*darurāh*) at the initial stage for the development of the Islamic finance industry. This approach, however, was criticized regarding its substance and legitimacy (Laldin & Furqani, 2016).

Replication approach was adopted by the Islamic scholars and practitioners to convert conventional models to Islamic models because innovating products from the grass-root level was time-consuming and costly. Meanwhile, it is paramount that *maqāsid al-Shari'āh* (the higher objectives) be upheld while structuring and innovating new products; otherwise, the public will lose the confidence in the Islamic financial system (Akhtar, 2008). Furthermore, financial innovation should be designed carefully in a way which strives to achieve higher objectives and does not violate Islamic laws (Iqbal & Molyneux, 2005). Since the Islamic financial industry shares many features with its conventional counterpart, the product engineering ought to be more simplistic rather than being complex (Iqbal, 1999). *Shari'āh*-compliant Islamic products do not mean a mere satisfaction of the minimum requirement of Islamic jurisprudence but to structure and orient Islamic finance with Islamic spirit and values (Laldin & Furqani, 2012).

It is, however, noteworthy that, replicating conventional products in a *Shari'āh*-compliant form is not the ultimate objective of the *Shari'āh*; instead, the goal is to strive to become 'alternative' to the conventional finance and not 'replicative.'

9.4 Combination of contracts

There are two types of investment categories in the Equity-linked Islamic SPs. The first part is applied to protect the investment in order to make a profit to at least cover the initial amount that has been invested. The second part is being used to replicate derivatives through employing contracts such as *urbun* or *wa'ād* to buy some of the underlying assets which standardize against some indices.

The proceeds under these contracts are used to purchase certain commodities in order to sell it later to the issuer. The selling price shall be deferred to a specific period because the issuer intends to create an obligation to pay a fixed selling price to secure the capital. After that, the issuer shall immediately give a unilateral promise to buy particular goods from investors at a specific selling price that standardizes against a specific index (ISRA, 2015). Furthermore, it can be seen that at least two contracts are executed. This raises the *Shari'āh* issue of a combination of two contracts in one single transaction. The issue of a merger of different contracts in a single transaction is not new. Almost every modern Islamic financial instrument has been permeated by this pre-agreed hybridization of contracts of various forms in a variety of orders and formats. Thus, some scholars believe that the merger of contracts does not always have to cast doubt on the validity of the product from the *Shari'āh* standpoint unless contracts are concluded on an inter-conditional basis or such combination results in the over-circumvention of a prohibition (El Diwany, 2003).

AAOIFI *Shari'āh* standard no. 25 has established specific guidelines and conditions for contract amalgamation as follows:

1) The merger of the contracts should not include cases that *Shari'āh* explicitly forbids, such as the combination of sale and loan.
2) The combination of contracts should not be used as a trick for practicing *ribā.*
3) The amalgamated contracts should not contradict each other in terms of the underlying rulings and ultimate goals.

Therefore, HSBC Amanah's 'Islamic Equity-Linked Structured Investment-I' is structured using the concept of *wakālāh bi al-istithmār*, and incorporates the concept of *wa'ād,* commodity *murābahāh,* and commodity *musāwamāh* for the hedging arrangement and investment purposes. Hence, all the combination of contracts are acting independently; hence, they are not used as a trick for practicing *ribā*.

9.5 Shari'āh issues in Islamic options

In a call option, the owner (of the call option) has a right but not the obligation to purchase the underlying asset if the price increases; whereas in a put option, the owner (of the put option) has a right but not the obligation to sell the underlying asset if the price decreases. A *Shari'āh* issue that arises here is the fee or premium paid on the promise of purchase or sale of the options. Usmani, as cited in Bacha (1999), clarifies that the impermissibility of options is based on the fees charged for the pledge. However, it is obligatory to remove the promise of paying a premium on the options to make it compliant with the Islamic commercial law. Therefore, as an alternative to the premium, scholars suggest employing "earnest deposit" or *urbūn* to make it *Shari'āh*-compliant. *Urbūn* is defined as a sale contract whereby the purchasing party pays a down payment to the selling party as a promise to purchase a particular commodity. If the commitment is fulfilled, the down payment is regarded as part of the price. If the commitment is not fulfilled, the down payment is non-refundable and retained by the selling party (Kamali, 2000). According to the AAOIFI *Shari'āh* standard no. 20 section 5/2/3/1, the options are permissible but with implementing *urbūn* as stipulated below:

> The conclusion of a contract pertaining to ascertained assets is permitted according to the *Shari'āh* along with the payment of part of the price as 'Arboun (Earnest Money). However, with the stipulation that the buyer has the right to revoke the contract within a specified period in lieu of the entitlement of the seller to the amount of earnest money in case the buyer exercises his right of revocation. It is not permitted to trade the right established with respect to the earnest money (AAOIFI *Shari'āh* standard no. 20, section 5/2/3/1, 2017).

Another issue that arises is the marketability of *urbūn* based options in the secondary market where the buyer intends to sell the options to a third party. As mentioned above, *urbūn* is a sale contract between two parties, and therefore, the seller is obliged to sell the subject matter to the buyer. However, if the buyer decides to sell his right (to precede or recede), then this can be settled only with the consent of the seller (Dali & Jalil, 2006). Furthermore, regarding the issue of trading the *urbūn* based options, AAOIFI in its *Shari'āh* standard no. 20, section 5/2/3/1 states that "it is not permitted to trade the right established concerning 'Arboun (earnest money)." In contrast, Obaidullah indicates that several scholars have made an analogy between options and *khiyār*, concluding that, according to previous scholars, *khiyār* can be inherited. Therefore, it proves that the ownership of *khiyār* can be transferred (Dali & Jalil, 2006); hence, tradeable.

In addition to *urbūn*, *wa'ād* is said to be able to replicate a conventional call option; however, scrutiny of the latter shows some potential issues in practice. Thus, it is argued that the two unilateral *wa'ād* given by the seller and buyer in Islamic SPs may be viewed as a bilateral *wa'ād*. AAOIFI, however, differentiates between two kinds of *wa'ād* –the unilateral *wa'ād* and the bilateral *wa'ād*. AAOIFI resolves that the binding unilateral promise is permissible; whereas, the binding bilateral promise is impermissible (AAOIFI, 2015). Similarly, the OIC Islamic Fiqh Academy also opined in its earlier resolution, which states that binding bilateral promise is impermissible. However, the argument put forth by the supporters of *wā'adān* structure is that the two promises (*wa'adān*) are given unilaterally and the conditions of their realization are also different. Hence, only one promise will be effective at all times because they are independent and unrelated to each other. Therefore, regarding it to be permissible (ISRA, 2015).

Conclusion

The development and innovation of Islamic SPs is a replication of the conventional SPs. This phenomenon is apparent in the view of the various Islamic contracts discussed in this paper. Islamic SPs are a replica of the conventional SPs wrapped in an Islamic covering. Although innovation in devising Islamic SPs are encouraged, it should not be devised to merely differentiate from the conventional SPs in its legal status; rather, the innovation of Islamic SPs must reflect the actual values of Islam that advocates to achieve economic justice, which the conventional banks are missing. Notwithstanding, the research does acknowledge though, that there is undoubtedly a necessity to innovate Islamic SPs to meet the growing needs of the clients otherwise the Muslim affluent will resort to conventional SPs, hence, dealing with *ribā*. The research, however, firmly concludes that the prevailing innovation is not a real innovation; instead, it is merely an amalgamation of the conventional SPs. Therefore, the research attempts to draw attention of the Islamic scholars to enhance and simplify the perplex mechanism of SPs to cater the needs of the affluent clients. It is also emphasized that the designing of the Islamic SPs should be in a manner that is not merely a replication, rather, the innovation of the Islamic SPs must be designed to achieve the higher objectives of the *Shari'āh*. It is noteworthy that, although the amalgamation is not against the *Shari'āh per say*, the replication, however, is devoid of the real objectives of the *Shari'āh* (*maqāsid al-Shari'āh*). Hence, once put in practice without due acknowledgement of its adverse economic effects, these ratcheting SPs will yield similar results as *tawarruq*, which was initially permitted by the *Shari'āh* scholars at the advent of Islamic finance industry on a condition to slowly detach from it. However, stayed everlastingly, and needless to say, there are no notable indications of it being replaced in a near future.

References

AAOIFI. (2015). Shari'ah Standard: 20, 25 & 27.

Akhtar, S. (2008). Islamic Finance: Authenticity and Innovation - A Regulator's Perspective. Harvard Law School, 2.

Bacha, O. I. (1999). Derivative Instruments and Islamic Finance: Some Thoughts for a Reconsideration. INTERNATIONAL JOURNAL OF ISLAMIC FINANCIAL SERVICES, Vol. 1, (No. 1), 1–16. Retrieved from https://mpra.ub.uni muenchen.de/ 12752/1/MPRA_paper_12752.pdf

Bullard, R. (2015, March 30). What is a Structured Product? (M. UK, Interviewer)

Bennett, M. (2011). ISLAMIC FINANCE AS A STRUCTURED PRODUCTS BUSINESS LINE. Journal of Law and Financial Management, 10(1), 2-20. Retrieved May 7, 2019, from http://www5.austlii.edu.au/au/ journals/JlLawFinMgmt/2011/2.pdf

Dar, R. H. (2018, September 12). Islamic structured products: Too complex for their own good? Islamic Finance News. Retrieved May 3, 2019, from http://afridiangell.com/items/limg/c_326Islamic %20structured%20 products_Too%20complex%20for%20their%20own%20good_IFN15_37%20_12SEP18.pdf

Dual Currency Investment (DCI-i). (n.d.). Retrieved May 8, 2019, from RHB Group: https://www.rhbgroup.com

Dali, N. R. S. B. M., & Jalil, A. Bin. (2006). Urbun Call Options: A Proposal for an Islamic Risk Management Tool. National Seminar in Islamic Banking and Finance: Islamic Wealth Management: Prospects, Issues and Challenges, (2006), 1–13.

Delorenzo, Y. T. (2009). The Total Returns Swap and the " Shari'ah Conversion Technology " Stratagem. Retrieved from https://uaelaws.files.wordpress.com/2012/06/delorenzo-copy.pdf%0A

El Diwany (2003, September). Traveling the Wrong Road Patiently. Banker Middle East. Available at http://www.islamic-finance.com

Firoozye, N. (2009). Structured Products - the most suitable, efficient and fittest? Opalesque Islamic Finance Intelligence.Retrieved,May3 ,2019 ,from

https://www.researchgate.net/publication/319874068/Structured_Products_the_most_suitable_efficient_and_fittest
Hakan, E. E., & Gulumser, A. B. (2011). Impact of Interest Rates on Islamic and Conventional Banks: The Case of Turkey. Munich Personal RePEc Archive, (29848), 1–19. Retrieved from https://mpra.ub.uni-muenchen.de /29848/
Haron, S., & Ahmad, N. (2000). The effects of Conventional interest rates and rate of profits on fund deposited with Islamic banking system in Malaysia. International Journal of Islamic Financial Services, 1(4). Retrieved from https://www.researchgate.net/publication/254349771_The_effects_of_conventional_interest_rates_and_rate_of_profit_on_funds_deposited_with_Islamic_banking_system_in_Malaysia
Hasan, A. (2010). Islamic structured products - Issues and challenges, (November). Retrieved from https://www.researchgate .net/publication/290521004_Islamic_structured_products_Issues_and_challenges
Hayes, A. (2019). Leverage. Retrieved August 5, 2019, from https://www.investopedia.com/terms/l/ leverage.asp
International Shari'ah Research Academy for Islamic Finance. 2015. Islamic Capital Markets: Principles and Practices, Kuala Lumpur, Malaysia: ISRA.
Iqbal, M., & Molyneux, P. (2005). Thirty Years of Islamic Banking: History, Performance, and Prospects. New York: Palgrave Macmillan, 4.
Iqbal, Z. (1999). Financial Engineering in Islamic Finance. Thunderbird International Business Review, 41(4–5), 54–59.
Islamweb.net. (2014). Ruling on Online Forex Margin Trading. Retrieved June 5, 2019, from https://islamweb.net/en/fatwa/262402/ruling-on-online-forex-margin-trading
Islamweb.net. (2015). Using the leverage system in Forex transactions. Retrieved June 5, 2019, from https://islamweb.net/en/fatwa/274720/Investment Products. (n.d.). Retrieved May 4, 2019, Retrieved from https://www.hsbcamanah.com.my/investments
Investments. (n.d.). Retrieved May 7, 2019, from HSBC Amanah: https://www.hsbcamanah.com.my/investments/
Kamali, M. H. (2000). Kamali - Islamic Commercial Law - An Analysis of Options. The American Journal of Islamic Social Science.
Laldin, M. A., & Furqani, H. (2012). The Objective of the Shari'ah in Islamic Finance: Identifying the Ends (Maqasid) and the Means (Wasa'il) (No. 32). Kuala Lampur, Malaysia.
Laldin, M. A., & Furqani, H. (2016). Innovation Versus Replication Some Notes on the Approaches in Defining Shari'ah Compliance in Islamic Finance. Al-Jāmi'ah: Journal of Islamic Studies, 54(2), 249–272.
Morrison, & Foerster. (2018). Structured Products 2017 at a Glance. Morrison & Foerster LLP.
Maybank. (2019). Retrieved from https://www.maybank2u.com.my/mbb/m2u/public/personalDetail04.do?channelId =INV-Investment&chCatId=/mbb/Personal/INV-Investment&cnt TypeId=0& cntKey=INV08.03
Osphare-Druilhe, N. (2016, January 21). BNP Paribas Wealth Management. Retrieved from https://wealthmanagement.bnpparibas/en/expert-voices/understanding-structured-products.html
Rahman, M. P., & Kassim, S. (2017). Are Shari'ah-Compliant Structured Products Able to Withstand Global Financial Shocks? A New Perspective on the Performance of Shari'ah Compliant Structured Investment-Linked Plans in Malaysia. Journal of Economic Cooperation and Development, 38(1), 161-182.
Securities Commission. (2014). Resolutions of The Shari'ah Advisory Council of The Securities Commission Malaysia (2012 - 2015), 1–45.
SIDC, S. I. (2015). Structured Products.
SLCG, S. L. (2009). Structured Products in the Aftermath of Lehman Brothers.
SC. (2019). Retrieved from https://www.sc.com.my/analytics/structured-products/list-oflodgement-%E2%80%93-structured-product-programmes
SIDC. (2015). Additional Reading Material on Structured Products. Retrieved from: http://www.sidc.com.my/SIDC /files/d8/d8d84b15-4d27-48db-aa1d-453922b5ec94.pdf
Vanini, P., & Pohl, W. (2015). Structured Products: Performance, Costs and Investments.
Wu, A., & Pitts, C. (2017, August). Asian Structured Products. Retrieved from CFA Institute Research Foundation.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 431-447
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.99

When Customers Do Not Pay: A Winning Negotiation Case in Brazil

Dr. Murillo de Oliveira Dias[1], Ana Paula Ribeiro[2], Raphael Albergarias[3]

[1] Coordinator of the DBA Program at Fundação Getulio Vargas, Brazil
[2] Fundação Getulio Vargas, Brazil

Correspondence: Dr. Murillo de Oliveira Dias, Fundação Getulio Vargas, Praia de Botafogo, 190, Botafogo, Rio de Janeiro – Brazil. Tel: +55 21981917474 E-mail: murillo.dias@fgv.br // agenda.murillo@gmail.com

Abstract
Debt collection without losing a valuable customer is a challenge that business negotiators face daily, no matter the size, type, or country of the organization. Currently in Brazil, near 62.6 million customers with overdue accounts are registered at the Credit Service Protection (Serviço de Proteção ao Crédito – SPC), representing approximately 40 percent of the Brazilians between 18 and 95 years old. This single case study investigated a successful farm debt collection case, negotiated between a farmer and a financial agent from a credit cooperative in Paraná State, Southern Brazil. Key findings pointed out critical success factors on debt collection negotiations, useful to business negotiators in general such as financial agents, bank managers, mediators, and overall practitioners. Discussion and recommendations for future research complete this work.

Keywords: Debt Collection, Negotiation, Customer Satisfaction, Brazil

1. Introduction

Dealing with late payments is a challenging task for business negotiators. Some are primarily assertive and forceful, while others are attentive and careful. Harvey Specter, the character from the tv law drama series Suits Harvey Specter, and Mike Ross are characters carried out by the actors Gabriel Macht and Patrick J. Abrams, respectively, on the North American tv legal drama series *Suits*.[1] Harvey teaches his associate, Mike Ross, how to be assertive and forceful with clients: "Mike: -You mean how you don't get emotional about a client? Harvey: -No, I mean, you keep pressing until it hurts. Then you know where to look."[2] Unlike Harvey, Mother Teresa teaches us how to be attentive and careful with people, through love and sacrifice: "if you love until it hurts, there can be no more hurt, only more love." Despite its contrasts, a hurtful process is suggested in both courses of action. Business negotiators face a similar dilemma when chasing debt collections: how to recover debts from late payment without losing a valued customer? In such cases, what is the most effective negotiation strategy? Harvey's assertive recommendations or Mother Teresa caring ones?

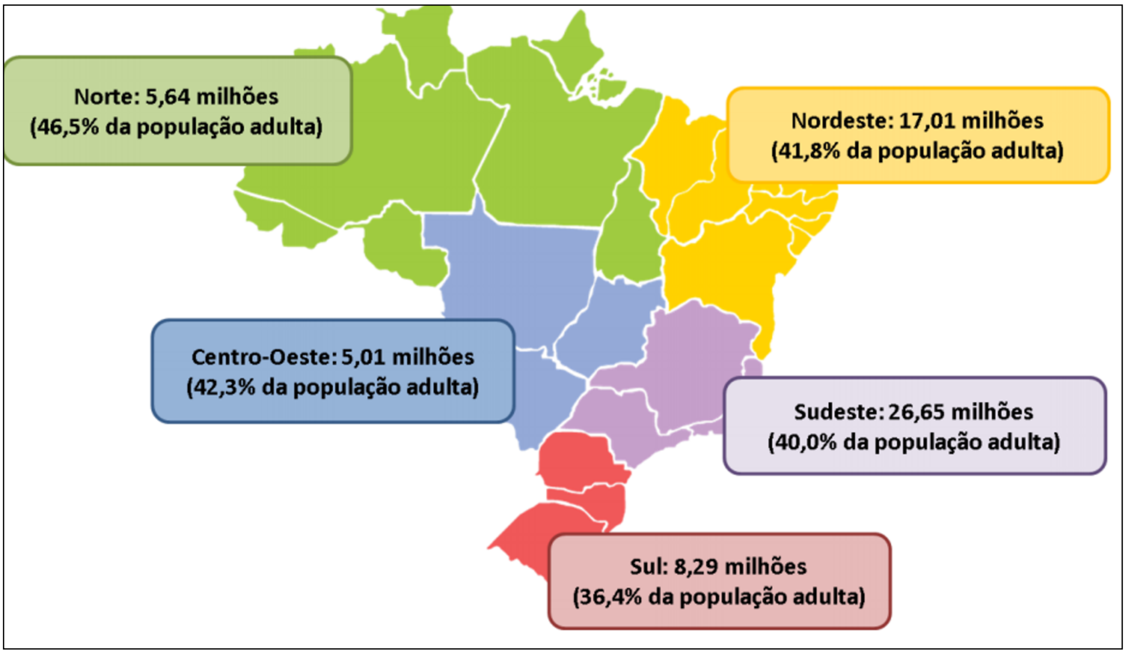
[1] Harvey Specter and Mike Ross are characters carried out by the actors Gabriel Macht and Patrick J. Abrams, respectively, on the North American tv legal drama series *Suits*.
[2] Dialog occurred on *Suits,* season one, episode one

We addressed these questions in the present research, aiming to further extend current knowledge on debt collection negotiation. We combined multiple-methods approach, such as in-depth interviews, archival research, direct observation, and case study, to provide an insightful negotiation case occurred between a financial agent from a credit cooperative and a local farmer in southern Brazil.

First, negotiation is defined as a "process of communication by which two or more parties seek to advance their interests or those of the persons they represent through an agreement on the desired future action" (Salacuse, 2003, p. 11). Negotiation is also defined as "a social interaction process, which involves two or more persons, regarding their interests, identity, and cognition, and dedicated to reaching an agreement over the substance negotiated through mutual gains" (Dias, 2016, p.29). Moreover, Business negotiations are defined "as the social interactions between two or more persons, regarding their interests, and dedicated to reaching an agreement on making, buying, or selling goods or providing services in exchange for money, or part of a job" (Dias, 2016, p.30). According to Fisher, Ury, and Patton (1981), a successful negotiation is the one that parties stop looking for alternatives. Moore (2003) asserts that a negotiation should be considered 100 percent successful when three types of interests are attained: (a) material; (b) psychological, and (c) procedural interests (P.321-322).

Furthermore, debt collection is a hot topic in Brazil. In 2017, approximately 60.2 million Brazilians between 18 and 95 years old (near 40 percent of the entire population) had their names on bad debt lists. In 2018, the default rates increased 4.4 percent, representing 62.6 million people, according to the National Credit Protection System – *Serviço de Proteção ao Crédito* (SPC, 2018) [3]. In sum, there are currently more debtors in Brazil than the entire population in Italy. Therefore, the development of strategies to negotiate effectively bad debts is crucial for any business negotiators regardless of country, size, market, or type of company. Figure 1 illustrates the distribution of the debt defaults in Brazil. Observe a clear trend regarding South region debts, representing the lowest percentage of debts amongst Brazilian regions.

Figure 1 Estimative of debt defaults in Brazil in 2018. Source: SPC, 2018. Reprinted under permission.



[3] The SPC Brazil (Credit Protection Service) is the information system of the National Confederation of Shopkeepers (CNDL). SPC is the largest database of Latin America in credit information on individuals and companies. SPC covers all the 26 Brazilian states plus the Federal District.

Figure 2 highlights the distribution of individual defaults per type of expenditure:

Figure 2 Individual debts in Brazil per expenditure on December 2018. Source: SPC, 2018. Reprinted under permission.

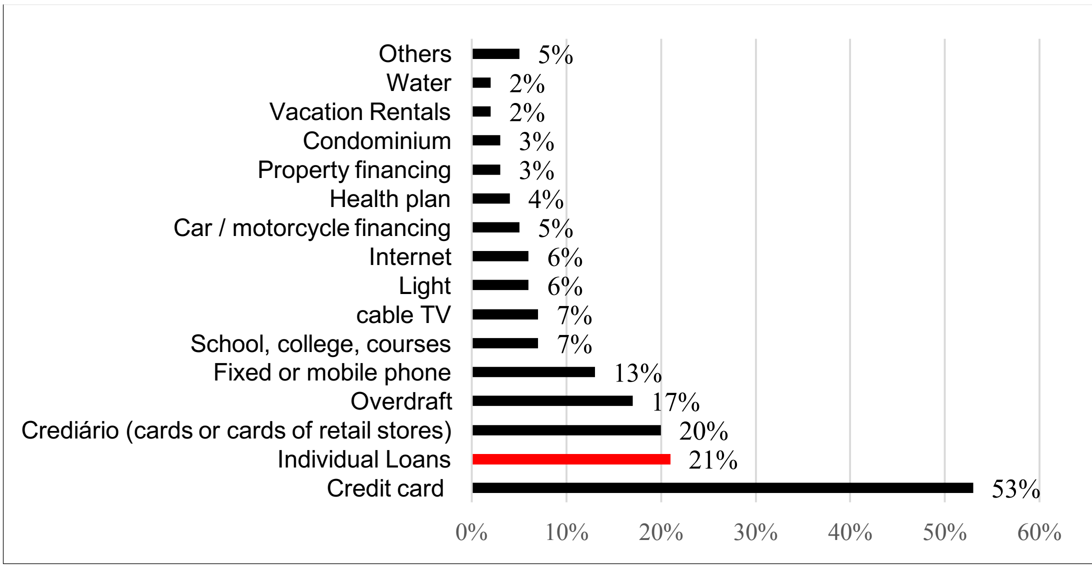


Figure 2 also illustrates the main reasons why Brazilian had their names inserted on SPC list as bad debtors[4], on December 2018. Credit card expenditures represent, by far and large, 53 percent of the total individual debt defaults in Brazil. Observe also the subject under investigation, *late payment in loans*, which occupies the second highest reason for debt defaults in Brazil, with 21 percent of the total (SPC, 2018).

Next, cooperative societies, especially credit cooperatives, have also been attracting much scholar attention recently (Dias, M. & Teles, 2019; 2019b; Dalacosta, Dias, M., Meirelles, 2019; Dias, M., 2018; Dias, M. & Craveiro, 2019; Dias, M., Krein, Streh, Vilhena, 2018; Dias, M. & Ramos, 2018; Dias, M. & Teles, 2018). Despite this interest, there has been little discussion on debt collection regarding credit cooperatives in Brazil. Therefore, this research is helpful to extend the current knowledge on the subject and is useful to financial agents, bank managers, customers, negotiators, mediators and practitioners in general, regarding the issues under investigation.

Moreover, insightful Brazilian business negotiation cases have been widely studied to date, such as Dudalina case (Dias et al., 2015, 2014); Fiat Chrysler in Brazil (Dias M., et al., 2014, 2013); BMW in Brazil (Dias M., Navarro and Valle, 2013); Netflix in Brazil (Dias, M. & Navarro, 2018); Boeing x Embraer (Dias, M., Teles, and Duzert, 2018; Dias, M. Duzert, 2018). Craft beer industry in Brazil (Dias, M. and Falconi, 2018); Heineken in Brazil (Dias, M, 2018), and Pirecal (Dias, M. & Davila, 2018).

Therefore, this study investigated a farm debt late payment negotiation, which has occurred in 2018 at the Brazilian credit cooperative Cresol Baser, located at Francisco Beltrão, Paraná State, Southern Brazil, as the unit of analysis from this descriptive single case study (Yin, 1988). Two parties were involved in the negotiation: (a) one financial agent from a credit cooperative, and (b) a local farmer. Hereafter financial agent and farmer, since their real names were protected by the undisclosed agreement.

Our attention has been attracted to this case due to its replicability in similar real-life case scenarios, and ultimately because the negotiation had everything to go wrong: (a) the farmer was in the middle of a divorce process, (b) momentarily out of funds - the assets were temporarily frozen by Court Order, (c) the farmer was facing overwhelming results of an economic crisis, with (d) low educational attainment – what proved to be an additional barrier to transpose between the parties, and (e) showing signs of emotional instability and burnout.

[4] Being in the SPC list in most cases imposes a series difficulties for customers, who may be unable to open a bank account, make purchases, installments, rent real estate and take loans.

Notwithstanding these pitfalls, an additional problem lies on the fact that Francisco Beltrão is a small municipality, over 130,000 inhabitants, with banks and financial institutions like credit cooperatives willing to supply credit (loans) in the region at competitive rates.

The temptation to play Harvey Specter, and simply "press until it hurts" should be left aside temporarily in this scenario for the main reason: the farmer is a cooperative associate, which means that the relationship between creditor and debtor is much closer within cooperatives than other types of associations, as illustrated in the following Figure 3:

Figure 3 Differences between cooperatives, associations, and companies in Brazil. Source, Sescoop, 2017, Dias, 2018. Reprinted under permission.

Diferentiation parameters	Cooperatives	Associations	Companies
Economic purpose	For economic purposes, but not for profit	Non-profit,with impossibility to perform a commercial function	For-profit
Minimum quantity of members for	20	2	1
Objective	To provide service to the cooperative	To represent the interest of the	profit
Vote	1 member = 1 vote	1 member = 1 vote	the more capital, the greater the voting
Incorporation of the share capital	Quotes	NA	Shares
Transferability of quotes	Can not be transferred to third parties	NA	Can be tranferred to third parties

Although the pervasive situation in Brazil, this case had a turning point, sponsored by the Brazilian Federal Government (BFG): on May 6, 2019, the Brazilian Development Bank (BNDES), founded in 1952, is the principal bank agent for supporting industry and infrastructure development in Brazil. BNDES issued the Circular SUP/ADIG N° 21/2019 Circular SUP/ADIG 21/2019 substituted Circular SUP/ADIG 46/2018 (BNDES, 2019), in turn creating the program for Rural Debts Composition, (Composição de Dívidas Rurais - Pro-CDD AGRO, our translation), releasing BRL 5 billion (approximately $ 1.5 billion) line of credit to finance agriculture, in order to assist Brazilian farmers from bankruptcy.

Finally, this work is structured as follows: the next section provides the methods (section 2.1) and research limitations (section 2.2), such as the Brazilian legislation in force, supporting the debt collection negotiation under review Then, a topic on current Circular 21/2019 (BNDES, 2019), here highlighted to evidence the financial agent's sphere of action (section 3). Later, the case background and key findings (section 4), followed by discussion (section 5). Finally, recommendations for future research (section 6) compile the present research.

2.Methods and Research limitations

2.1 Methods

The present research is qualitative, interpretive, where the multi-methods approach was employed, such as descriptive single case study, qualitative in-depth interviews, archival research, and direct participation. The unit of analysis is the negotiation that occurred between the financial agent and the farmer at Francisco Beltrão, Paraná State (Yin, 1988).

We interviewed the financial agent who negotiated the debt collection with the farmer. The interviewee was invited via e-mail, and all questions posed were answered (100 percent response rate). We adopted a semi-structured questionnaire that gave more fluidity to the interview, following Goffman's (1959, 1961) dramaturgical theory.

Only one interviewer conducted the interview. The interview occurred in two sessions: first, on June 6, 2019. The second interview occurred on June 10, 2019. A second interview was necessary, because some points needed to be further clarified, such as precise data on the negotiation, additional facts, and figures. The interviews occurred in calm places, with no interference or noises. Warm-up questions were initially posed, then the remaining questions were asked. Field notes were taken by the interviewer. Primary data on both interviews were collected through audio recordings. The interviews were conducted entirely in Portuguese and then translated into English. The interviewee consented in disclosing information and quoting. Only the name was omitted to protect the identity of the interviewee, as per request. Data gathered were transcribed and coded through descriptive and in Vivo coding, the latter "to honor the participant's voice" (Saldaña, 2013, p. 91). Primary data were then analyzed through content analysis. Secondary data were gathered through literature review and archival research.

2.2 Research limitations

The current research is limited to Brazilian laws on credit cooperatives. Other countries and their own laws are not investigated here. Despite the Brazilian Laws being applied to thirteen different categories of cooperatives (OCB, 2018), only credit cooperatives are studied here. Brazilian Federal Constitution 1988 limits this research (Brasil, 1988), along with the following legal dispositive, currently in force: (a) provisional measures; (b) laws; (c) decrees; (d) complementary law; (e) civil code; (f) resolutions, and (g) circulars from Brazilian Central Bank, (h) Federal Accounting Council (Conselho Federal de Contabilidade – CFC), and (i) Circular BNDES 21/2019 (BNDES, 2019). Figure 4 illustrates the overall Brazilian legislation on Credit Cooperatives, which support and limits the scope of the current investigation.

Figure 4 Brazilian Laws on credit cooperatives. Source: Dias & Teles, 2019. Reprinted under permission.

Normative	Publication	Subject
Law nº 4.594	Dec 31, 1964	Creates Monetary, Banking and Credit Policy and Institutions, creates the National Monetary Council
Law nº 4.829	Nov 05, 1965	Institutionalizes rural credit
Law nº 5.764	Dec 16, 1971	National Cooperative Policy and establishes the legal regime of cooperative societies in Brazil
Brazilian Federal Constitution	Oct 05, 1988	Article 5, which recognizes the activity, (c) Article 146, which establishes the co-operatives taxation, (d) Article 174, issuing the co-operatives regulation and normalization, and (e) Article 192, which regulates the national financial system
Law no 8.394	Nov 18, 1994	ProvidePublic Register of Mercantile Companies and Related Activities and provides other measures (including cooperatives registering)
Decree 3.017	Apr 06, 1999	Approves the Regulation of the National Service of Learning of Cooperativism - SESCOOP
Provisional Measure MP 2.168-40	Aug 24, 2001	Provides for the Program of Revitalization of Cooperatives of Agricultural Production - RECOOP, authorizes the creation of the National Service of Learning Cooperativism - SESCOOP.
Law no 10,406 Brazilian Civil Code	Jan 10, 2002	Chapter VII, articles 1093, 1094, 1095, and 1096 establishes the Cooperative Societies, its limits and scope
Complementary Law nº 130	Apr 17, 2009	Law of Credit Cooperatives Complementary Law - National Cooperative Credit System and repeals provisions of Laws 4,595, December 31, 1964 and 5,764, December 16, 1971
Law nº 12.690	Jul 19, 2012	Provides for the organization and operation of Labor Cooperatives; establishes the National Program for the Promotion of Labor Cooperatives - PRONACOOP; and repeals the sole paragraph of art. 442 of the Consolidation of Labor Laws - CLT, approved by Decree-Law No. 5,452, dated May 1, 1943
Decree 8.163	Dec 20, 2013	Establishes the National Program of Support to Associativism and Social Cooperativism - Pronacoop Social.

Finally, this study is limited to the Brazilian farm or rural individual credit system (excluded corporations), negotiated between a local farmer and a financial institution, a credit cooperative. This work is also limited to the Brazilian legislation in force, including BNDES circular 21/2019, to be described in the following section.

3. Brazilian Government Farm debt refinancing program

BNDES issued circular SUP/AOI 21/2019[5], on May 6, 2019 (BNDES, 2019), designed to support rural debt. Individuals and corporations are allowed to join the program to refinance rural debts. Through Circular 21/2019, individual farmers, and agricultural companies, including cooperatives, are allowed to participate in the program (BNDES, 2019, item 2.1). Farmers shall prove the incapacity to pay as a result of commercialization of products, frustration of crops by adverse factors, and occurrence detrimental to the development of holdings, and to demonstrate the economic viability of the activities developed in the ownership and payment capacity of the composition operation (BNDES, 2019, items 2.2, 2.3).

Circular 21/2019 stipulates the following general financing conditions for eligible farmers (BNDES, 2019, item 4), illustrated in Figure 5:

Figure 5 BNDES General financing conditions. Source: BNDES (2019)

Financing amount	Interest rates	Maximium Grace period	Maximum installments	Installments frequency
up to BRL 20 millon (approx. $5 million)	TJLP + 1,5% per year (BNDES) + 3% per year (financial institution)	3 years	144 months	monthly semiannually yearly

Additionally, according to Circular 21/2019, collateral should be freely negotiated between farmer and financial institution (BNDES, 2019). As mentioned before, BFG released five billion BRL to support agriculture debts.

4. Background

4.1 Credit cooperative Cresol

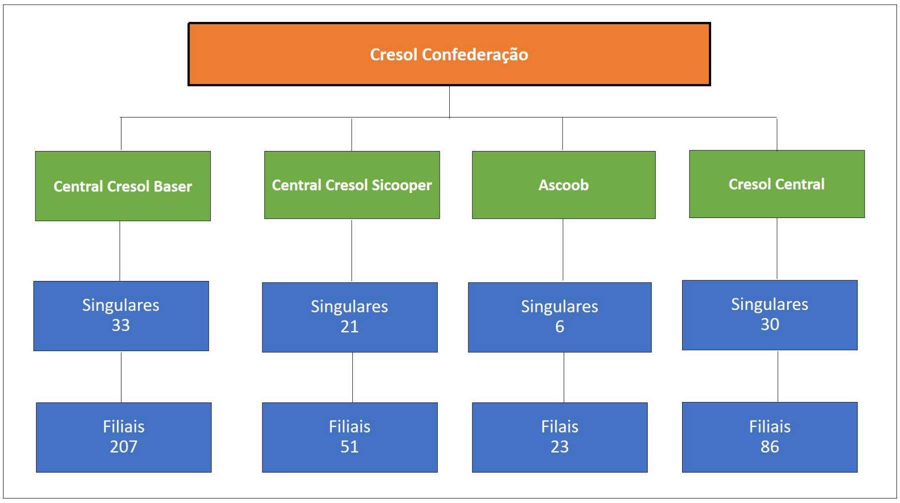
Cresol was founded in 1995, with the union of five cooperatives, at Francisco Beltrão, Southwestern Paraná State. In 2018, Cresol Confederation had 501,000 associates, with 528 bank agencies, BRL 2.76 billion in total deposits (approximately $ 700 million). In 2018, regarding rural credit, approximately BRL 1.3 billion (approximately $ 350 million) were loans, corresponding to 35 thousand direct contracts (Cresol, 2019). Regarding the National Development Bank (BNDES), Cresol Baser in 2018 conducted approximately 40,000 farm loans sponsored by BNDES. To date, Cresol operates in ten states, as illustrated in the following Figure 6.

[5] Which in turn substituted circular SUP/AOI 46/2018, with equal content. Only time extension was added.

Figure 6 Cresol System: Brazilian territorial coverage. Source: Cresol, 2019. Reprinted under permission

Cresol Confederation is organized as follows: (i) *Central Cresol Baser* (ii) *Central Cresol Sicooper*; (iii) *Ascoob*, (d) *Cresol Central* (Cresol, 2019). Figure 7 illustrates Cresol System structure. Observe that the negotiation took place at Central Cresol Baser, which comprises 33 singular cooperatives and 207 branches.

Figure 7 Cresol Confederação Structure. Source: Cresol, 2019.



4.2 Brazilian farmers: PRONAF and DAP

According to the Brazilian Agriculture Ministry (*Ministério da Agricultura, Agropecuária, Pesca e Abastecimento – Mapa)*, Brazilian small farmers are eligible to join PRONAF, which is a federal program for food, school lunch, and rural housing acquisition. (*Programa de Aquisição de Alimentos, Merenda Escolar e Habitação Rural*). Therefore, farmers should sign a Declaration of Aptitude for Pronaf (*Declaração de Aptidão ao Pronaf* - DAP) (MAPA, 2019).

DAP can be obtained both by the farmer and family farmer (individual), as well as rural companies, associations, cooperatives, and agro-industries (legal entities). Moreover, DAP classifies family farmers into four groups according to income and access criteria, illustrated in Figure 8:

Figure 8 Categories for Declaration of Aptitude for Pronaf. Source: MAPA, 2019.

Categories for Declaration of Aptitude for Pronaf (DAP)			
Group A	Group B	Group A/C	Group V
family farmers settled by the National Agrarian Reform Program (PNRA) or beneficiaries of the National Land Credit Program (PNCF) who did not contract the investment operation of the Special Credit for Agrarian Reform Program (Procera)	annual family income of up to BRL 20,000 ($ 5,000)	family farmers settled by the PNRA or beneficiaries of the PNCF who (1) contracted the first operation in Group "A" and (2) did not contract funding, except in the "A / C" Group itself	annual family income of up to BRL 360,000 ($ 90,000)

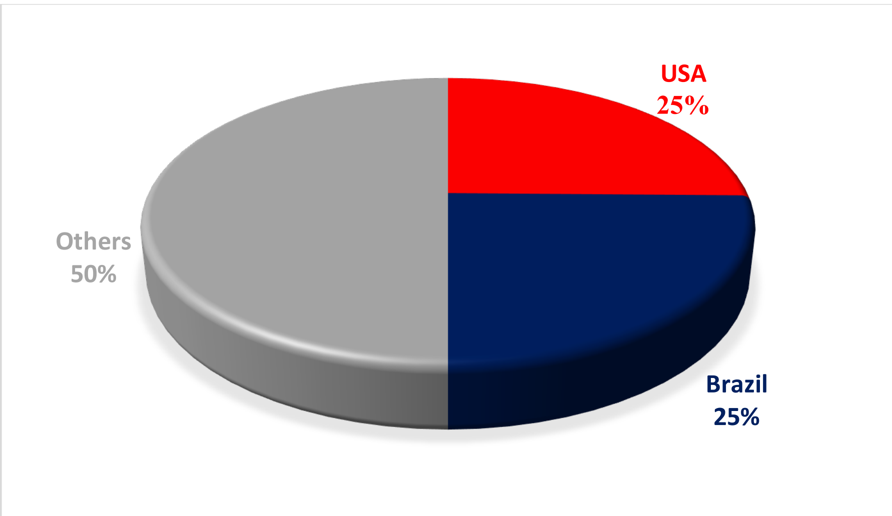
Observe in Figure 8, that local farmer who contracted a loan with Cresol is DAP Group V (annual income up to BRL 360,000, approximately $90,000). The next section describes the background on the economic activities under investigation, and the loan operation contracted by the farmer with Cresol. Once the farmer cultivates soybean, corn, and commercialized dairy products, the next sections 4.3.1, 4.3.2, 4.3.3 provide insightful information on these relevant economic activities for Brazil, helpful to frame the situation in the Brazilian agro-business context.

4.3 Brazilian corn and soybean cultivation and dairy production

4.3.1 Soybean cultivation activity

The local farmer contracted a loan of BRL 60,000 (approximately $ 15,000), primarily to finance a soybean plantation in a small property of 14 ha. According to the Brazilian Embrapa (Empresa Brasileira de Pesquisa Agropecuária), National Agriculture Research Company, Brazil is the second largest soybean producer, and the first in exports (EMBRAPA, 2019). Figure 9 depicts the soybean cultivation worldwide:

Figure 9 Worldwide soybean production in 2018. Source: Emprapa, 2019.

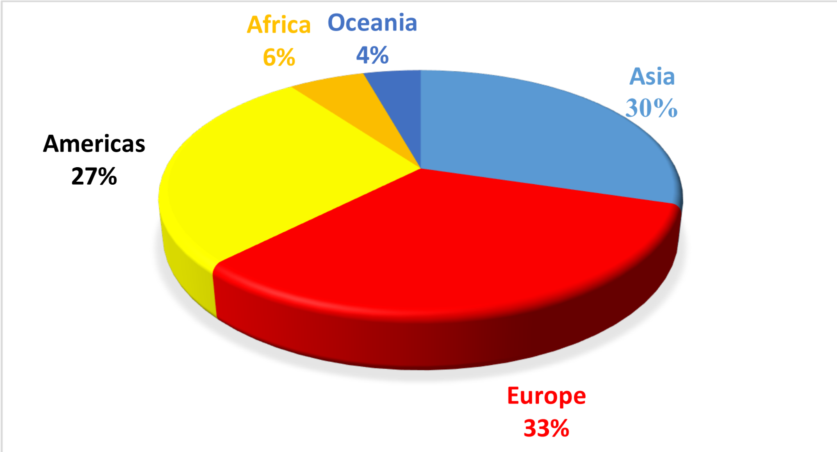


Observe in Figure 9 that Brazil and the United States produce approximately 50 percent of the soybean cultivated within the globe. In Brazil, the largest soybean producer is Mato Grosso State, with 31,887 million tons, and planted area of 9.519 million hectares (ha). Paraná State - where the negotiation took place, is the second largest soybean producer in Brazil, with the production of 19,070 million tons, and planted area of 5.444 million ha in 2018 (Embrapa, 2019).

4.3.2 Dairy production activity

Regarding dairy production, which is a business established for the harvesting and processing animal milk (cows, in this case), Brazil is the 4th largest dairy producer, with 35.1 billion liters produced, against 798 billion liters worldwide produced in 2017 (Embrapa, 2019). Minas Gerais State is the largest Brazilian milk producer. Agricultural cooperatives in Brazil are responsible for 25 percent of the overall dairy production (Embrapa, 2019). The worldwide cow milk production is depicted in the following Figure 10:

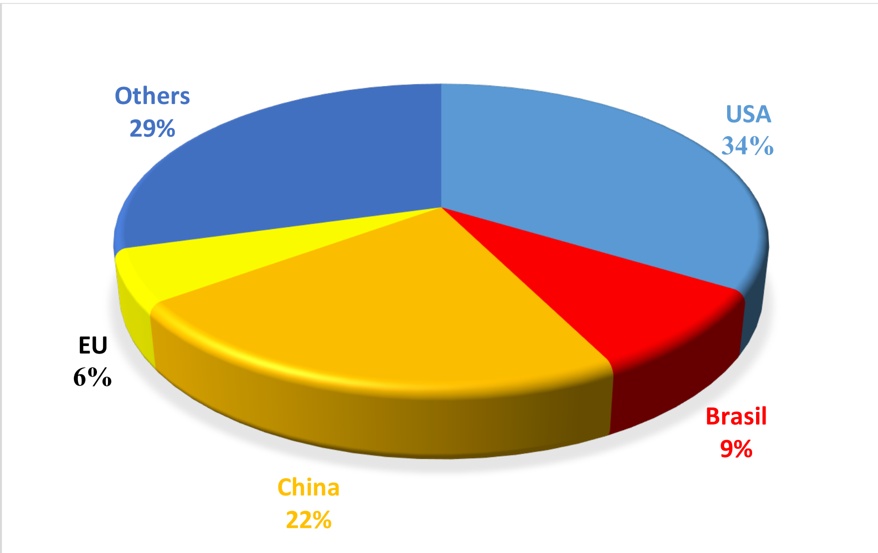
Figure 10 Cow milk production by continent (2017-2018). Source: Embrapa, 2019.



4.3.3 Corn production activity

While soybean production has immediate financial liquidity due to its international market, corn cultivation is destined mostly in Brazil to supply internal demand (Embrapa, 2019). In 2018/2019 biennium, Brazilian harvest is estimated to overpass 100 million tons. Nevertheless, Brazil is the third largest corn producer, behind the USA and China, as illustrated in Figure 11:

Figure 11 Largest corn producers worldwide. Source: FIESP, 2019.



Finally, soybean cultivation is approximately 2.5 times more profitable than corn cultivation, and 44 times greater than a liter of milk. While a sack of soybean of 60 kg was commercialized for R$ 69,58 per sack, the same amount of corn was commercialized for R$ 27,38, and the liter of milk R$1,56 per liter (Embrapa, 2019)[6]. Therefore, to the farmer, the most significant economic activity is soybean cultivation.

4.4 Negotiation case

On January 2018, the local farmer contracted a loan at the credit cooperative to invest in corn and soybean plantation, along with dairy production, within a small property of 14 ha, at Santa Luzia, a small village located at São Jorge d'Oeste, 68.5 km north from Francisco Beltrão, southwestern Paraná State, as illustrated in the Figure 12, as follows:

Figure 12 Francisco Beltrão, São Jorge d'Oeste, and Paraná State. Source: Embrapa. 2019. Reprinted under permission.

The local farmer signed two contracts, in total BRL 60,000, with the Cresol agency from São Jorge d'Oeste in January 2018: (a) *agricultural and husbandry funds contract*, to be employed in the corn plantation. This contract should be paid in a single installment, eleven months after the signature of the contract; (b) *investment contract*, for dairy cow's acquisition, to be paid semiannually in 24 installments, twelve years in total. Both contracts had no grace period.

On November 2018, the farmer paid neither the single installment from the contract (a) nor the second installment from the contract (b).

4.4.1 – Farmer

The local farmer is currently registered in MAPA (2019), as DAP V. Therefore, eligible to be recipient to the loan as mentioned earlier. The amount requested, BRL 60,000, is equivalent to 1/6 family income per year (see Figure 8). The farmer went to the Cresol's agency to apply for a loan giving his property as the contract collateral. Initially, the farmer contacted the cooperative manager first, who was the financial agent responsible for dealing with that kind of contract. The financial agent declared to know the farmer by sight for more than 20 years, and knew his reputation, describing the farmer as follows:

> The cooperative associate[7] Is an individual farmer possessing DAP. He is a married man, around his sixties. However, the marriage was not official, but they were gathered for more than twenty years. He had not completed the elementary school. He usually displayed an aggressive behavior, had a hobby for firearms, with no patience to negotiate. He is a rude person, difficult to deal with. He shows displays of being a stallion, macho, alpha male, and law-abiding in his own house. His wife was a hardworking person (Interviewee 1).

The local farmer got separated from his wife before debt failure. Since the beginning of the loan operation, the farmer kept paying the installments regularly. However, his wife decided to separate from the farmer and filed a suit against him. In consequence, the wife got a judicial order to prohibit the farmer from selling any of the family assets, including soybeans and corn, until final judicial sentence. He was allowed only to sell dairy products, for subsistence. The marital problems amplified the bad behaviors of the farmer:

[6] Quotation from June 14, 2019.
[7] i.e., the local farmer, Cresol's cooperative associate.

> It became harder to approach him, we needed an intensive, comprehensive, and understanding preparation, a special way of addressing subjects with him, such a stressed person living a familiar, momentarily drama. They were married, not in the paper, had four kids. After the process in Court, he could not sell the assets he had (Interviewee 1).

4.4.2 – Financial agent

On the other hand, the 27-year-old female financial agent,

> Started working at Cresol on January 2, 2017, as business analyst (financial agent). Within the same year, there was a job rotation within the agency, and I was promoted to Agency Manager, which is the position I hold today. I am undergraduate as Accountant, post-graduated in Auditing and Rural Cooperatives, currently coursing the MBA on Credit Cooperatives, with the certifications CPA 10, and CPA 20 (Interviewee 1).

4.4.3 – Debt and courses of action

Approximately one week before the payment deadline, the financial agent made a phone call to the farmer, just as a reminder. Once the farmer never delayed any installments, the situation was under control, and thus considered normal.

There were two installments to be paid by November 2018: (a) the only installment of the agricultural and husbandry funds contract, and the second out of the 24 installments of the investment contract. He did not pay any of them.

On the installments deadline, the farmer went to the cooperative agency to report his drama: he was sick, his wife decided to get a divorce, and filed a lawsuit against him. In consequence, he had his assets blocked by the Court of Justice to be sold, preventing him from paying his debt. The farmer explained that the local judge had temporarily frozen his assets, due to the process of divorce, prohibiting him from selling corn, soybean, or even cattle. Unable to capitalize himself and to pay his own debts, the farmer was facing a terrible financial stalemate, since dairy products (the only assets authorized to be sold, merely for subsistence) were not as profitable as soybeans and corn. Therefore, the farmer was unable to pay the loan debts. He told the financial agent as if his world collapsed before him. At that occasion, he asked for more time to fulfill the debt and future contract payments. In short, within the eleven months between the contract signature with Cresol and the payments deadline, the farmer's life had turn upside down.

Then, the financial agent started studying the case alternatives, remembered that a few days ago, she has been informed about the newly Circular BNDES 46/2018:

> At Cresol, we have a specific credit portfolio central. Thus, we receive mailing, manuals, normative, resolutions, circulars. Usually, we receive information reporting changes. I discovered circular BNDES in one of these reports, via e-mail (Interviewee 1).

Meanwhile, the financial agent had two courses of action, as soon as the farmer interrupted payments: (a) try to collect the debt through negotiation, or (b) to file a lawsuit against the farmer in the court of justice, ultimately taking his property as collateral, to pay off debts. The financial agent chose to negotiate rather than to file a lawsuit.

4.4.4 – Resolution BNDES SUP/ADI 46/2018[8]

As depicted in the previous Figure 5, BNDES Circular SUP/ADI 46/2018 stipulated the parameters for the debt collection negotiation at hand: (a) three years of maximum grace period; (b) favorable interest rates (see Figure 5), and (c) maximum installments extended to 144 months, paid (d) monthly, semiannually, or annually.

Next, twenty days after the past due date, the financial agent, asked for the cooperative president assistance and both decided to pay a face-to-face visit to the farmer because they considered such matter should be appropriately dealt face-to-face than by other means:

[8] currently in force Circular SUP/ADI 21/2019 – same content, but the deadline was extended to September 2019

> I did not go alone. I took the president of the credit cooperative with me. The farmer is a stressed person by nature, but not with me, and I was able to talk to him. In the farmer's house, he (the farmer), told us that he needed more time until he got a solution to the divorce process (Interviewee 1).

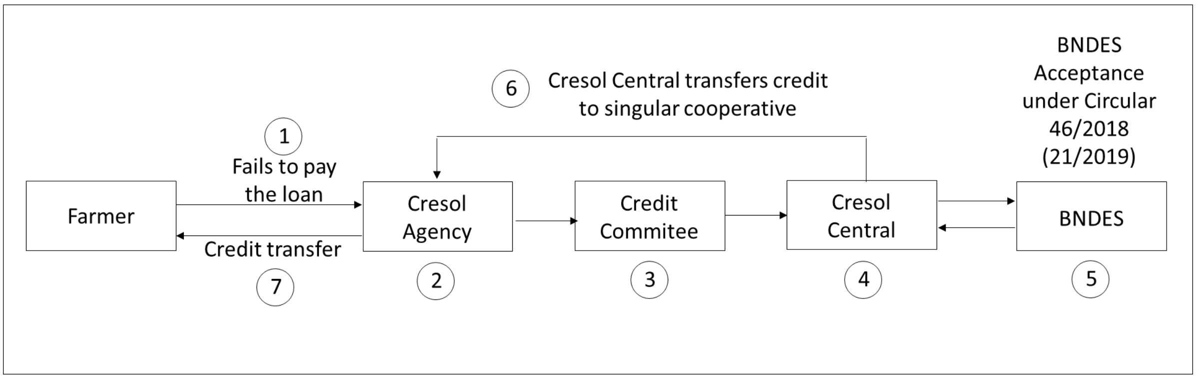
The financial agent also explained, why twenty days were necessary to contact the farmer, as well as the renegotiation process:

> I reminded the circular that came to us by e-mail, to be applied on cases like this. However, because of the BNDES participation, a technical project was required, the bureaucracy involved, the Cresol Central should be also involved, to be also approved internally, before going to BNDES. Therefore, a whole process preceded the negotiation. Cresol could refuse the alternative. Nevertheless, we sent the process, believing that the cooperative associate (i.e., the farmer) would be able to solve his issues at hand. The collateral was good, and the process was also facilitated because our cooperative seeks for the growth of their associates, it was also a way of helping him (Interviewee 1).

4.4.5 – Debt collection negotiation process

The debt collection renegotiation process is illustrated in the following Figure 13:

Figure 13 Debt collection case dynamics.



Note the negotiation process dynamics, which took approximately 15 days to be completed: (1) first, the farmer fails to pay the loan with Cresol; then, (2) Cresol agency (3) consults the credit committee for internal approval, before sending the process to (4) Cresol Central, for final internal renegotiation approval. Then the process is sent to (5) BNDES, in turn approving the loan under (5) Circular 46/2018 (current 21/2019). The credit is transferred to (6) Cresol Central. Next, the credit is transferred to the Cresol Agency. Finally, (7) the credit is transferred to the farmer's account destined to pay the pending debt.

4.4.6 –Ultimate contract signed with BNDES

After careful reasoning about the situation at hand, the farmer decided to formally accept the solution proposed by the financial agent, who recalls the farmer's reaction when the renegotiation process was revealed:

> The farmer was very concerned about both his financial and personal future. At the very beginning, he was very tense, suspicious of the proposal at hand. He is a nervous person by nature. However, at the end of the day, the helping hand was there, and he did not hesitate to finally taking the opportunity (Interviewee 1).

Then, the financial agent collected all the required documents and internal signatures on the renegotiation process. After internal approval, has sent to BNDES. In turn, BNDES approved the new loan, on the following basis:

(a) The two initial Cresol contracts were gathered in one single contract with BNDES, in total BRL 60,000.
(b) Two years of the grace period, starting in January 2019.
(c) Eight semiannually installments. The first installment should be paid in January 2021.
(d) Cresol signed the new contract as the guarantor, ensuring contract compliance between the parties.
(e) The initial installment paid by the farmer to the original Cresol investment contract became a sunk cost for the farmer.

(f) Collateral remained the same (local property).
(g) In case of a second debt failure, Cresol pays BNDES upfront and collects the farmer's property as collateral.
The next section presents the case analysis and discussion.

5 – Analysis and Discussion

In this case, we investigated a debt collection negotiation between a farmer and a financial agent. The first analysis regards the number of the negotiation participants (parties), as long the process escalates: initially started with two parties (farmer and agent), then involving multiple parties, like sectors within the agency, the Central cooperative and ultimately the BFG through BNDES (see Figure 13). In such debt collection negotiation cases, the higher the complexity, the higher the number of departments/legal entities involved.

Another aspect that called our attention was the fact that situational variables surpassed the dispositional ones in this case. Following Thompson (1990), who posited that "personality and individual differences appear to play a minimal role in determining bargaining behavior" (p.515). We found evidence supporting the citation.

Despite the farmer being a person with low educational attainments, showing displays of being an aggressive and forceful person, in the middle of a divorce process, he succeeded nevertheless in accomplishing a deal with the credit cooperative. In this regard, Thompson (1990) also argues that a situational variable represents the driving force of a given negotiation, stronger than a dispositional variable, and the personality influence only indirectly performance (Thompson, 1990).

Our analysis also indicated that the recommendation of being soft with the people and hard with the problem (Fisher, Ury and Patton, 1981) proved to be effective in this case. If the opposite, most likely the end of the negotiation should be the worst case scenario for both parties. If the parties clashed upon dispositional factors such as assertiveness, for instance, then the negotiation would end in the Court of Justice, and the farmer losing everything.

Evidence suggests that parties' energies should be redirected to the joint problem solving, not dispersed with destructive behaviors on both sides. Preserving the relationship proved to be also a critical success factor regarding a small farmer in a small town where everyone knows each other. In a scenario with multiple credit alternatives, playing forcefully like Harvey Specter from Suits¸ seems to be counterproductive to a case like this.

Our analysis also indicated that differences in gender, level of education, and even aggressiveness were not determinant to the case solution. We found evidence that suggests the supportive organizational culture playing significant a role to facilitate the agreement between parties: "The collateral was good, and the process was also facilitated because our cooperative seeks for the growth of their associates, it was also a way of helping him" (Interviewee 1). The credit cooperative's slogan is "Together we are strong" (*Juntos somos fortes,* in the original). This case evidenced that being forceful and assertive would not produce satisfactory results for the parties. On the other hand, being attentive and careful proved useful in this case.

We also found evidence that the internal dissemination of relevant information such as circulars, resolutions, normative, which are continually changing, proved to be crucial to the case solution. Also determinant was the BFG line of farm credit offered to support Brazilian agriculture, through BNDES. Without this information at hand, the outcome would probably be different: "I reminded the circular that came to us by e-mail, to be applied on cases like this" (Interviewee 1).

Our analysis also suggested that the participation of the cooperative president into the negotiation, along with the financial agent, proved to be effective in this case: "I did not go alone. I took the president of the credit cooperative with me. The farmer is a stressed person by nature, but not with me, and I was able to talk to him" (Interviewee 1). Despite the participation of a third party in this negotiation, it is not clear to what extent the cooperative president participation collaborated to the signature of the agreement.

According to the financial agent interviewed, lessons learned to suggest a different course of action, namely at the preparation phase, before the credit releasing:

> If I could go back in time, I would not release so much credit for that associate, especially with marital problems, always stressed at the cooperative agency. He usually paid everything quite fair, without keeping financial reserves at his account. Everything should be taken into consideration when releasing a credit. Another thing I would do differently is how to leave the farmer abreast of the maturities, the deadlines. They are not in the habit of being organized. I interviewed the ten largest Cresol's debtors, and noticed that only one of them kept financial records! The cooperative helped a lot to develop the region, but the lack of this analysis, at the end of the day brought financial problems to the cooperative associates (Interviewee 1).

This case suggested the following recommendations for financial agent's managers and overall practitioners:

1. *Be soft with the people and attack the problem* (Fisher, Ury and Patton, 1981). Being assertive and forceful, as playing Harvey Specter, would produce only unsatisfactory results, more stress, and loss for every party, with the rural property arrested by Justice, compromising the local agriculture activity.
2. *Focus on interests, not positions* (Fisher, Ury, and Patton, 1981). Evidence suggested that collecting the debt while keeping the customer becomes an even harder task if parties struggle for bargaining positions. For instance, once BNDES considered the amount already paid in the contract as a sunk cost, the farmer could insist in his position, not giving way to the new contract.
3. *Keep transparency*. This is valid for the entire negotiation process. It helps to improve performance and build trust among parties (Dias, 2016).
4. *Be focused on the solution and the future, not in the problem and the past.* Despite the fact that the financial agent knew the farmer long ago, the farmer's poor reputation did not play a significant part in the negotiation. Through concentrating on finding a *solution* to the case (i.e., the *future*), the financial agent avoided strong negative emotions that could easily jeopardize the entire negotiation. To ignore past grievances is a solid path for consensus building.
5. *Seek for mediators, whenever necessary.* The financial agent initiative of bringing the cooperative president to the face-to-face negation proved effectively because served to dissipate any future questions regarding the validity of the agreement, any additional questions regarding the case should be then, answered satisfactorily.
6. *Keep the credit without losing the client.* Keep both credit and client. In this sense, Mother Teresa recommended patience and caring with each other. Through love and sacrifice, results would be accomplished. Clients facing personal difficulties should be adequately, and essential, empathetically treated. In this case, this behavior proved to be effective.

6 – Future research and limitations

This case is limited to the Brazilian legislation on credit cooperatives. Other countries and types of associations are not investigated. Despite thirteen types of cooperatives operating in Brazil, only credit cooperatives were analyzed. This case is also restricted to agro-business. Other types of business are not the scope of the present research.

The case also displayed difficulties regarding gender and generation: while the farmer, male, was in his sixties, the financial agent, female, was in her twenties. Future research is encouraged to investigate similar cases with these two variables, to assess the performance and productivity of similar agreements.

Future research is encouraged to investigate the role of gender, generation, level of education differences in negotiation performance.

Finally, a good negotiator seems to be the one who can balance both Harvey Specter's assertiveness as well as Mother Teresa's carefulness.

References

Bacen (2007). Resolução n° 3.502 de 28/9/2007. Dispõe sobre novo cronograma e reprogramação do pagamento das dívidas de financiamentos ao amparo do Programa de Recuperação da Lavoura Cacaueira Baiana. Retrieved from https://www.bcb.gov.br/estabilidadefinanceira/exibenormativo?tipo=Resolu%C3%A7%C3%A3o&numero=3502, on April 18, 2019.

Bacen (2015). Resolução n° 4.434 de 5/8/2015. Dispõe sobre a constituição, a autorização para funcionamento, o funcionamento, as alterações estatutárias e o cancelamento de autorização para funcionamento das cooperativas de crédito e dá outras providências.Retrieved from https://www.bcb.gov.br/estabilidadefinanceira/exibenormativo?tipo=Resolu%C3%A7%C3%A3o&numero=4434, on April 18, 2019.

BNDES (2019). Brazilian Development *Bank. Circular SUP/ADIG 21/2019*. Retrieved from https://www.bndes.gov.br/wps/wcm/connect/site/cc8c076a-2c96-47e3-abe9-77107f598a88/19Cir21+Programa+BNDES+Pro-CDD+AGRO.pdf?MOD=AJPERES&CVID=mGepsIl, on June 6, 2019.

Brasil (1964). Lei nº 4.595, de 31 de dezembro de 1964.Dispõe sobre a Política e as Instituições Monetárias, Bancárias e Creditícias, Cria o Conselho Monetário Nacional e dá outras providências. Retrieved from http://www.planalto.gov.br/ccivil_03/LEIS/L4595.htm, on April 7, 2019.

Brasil (1965). Lei no 4.829, de 5 de novembro de 1965. institucionaliza o crédito rural. Retrieved from http://www.planalto.gov.br/ccIVIL_03/LEIS/L4829.htm /L4829.htm, on April 7, 2019.

Brasil (1971). Lei nº 5.764, de 16 de dezembro de 1971. Define a Política Nacional de Cooperativismo, institui o regime jurídico das sociedades cooperativas. Retrieved from http://www.planalto.gov.br/ccivil_03/leis/L5764.htm, on September 29, 2018.

Brasil (1988), Governo Federal. Constituição da República Federativa do Brasil.

Brasil (1994). Lei no 8.394, de 30 de dezembro de 1991.Dispõe sobre a preservação, organização e proteção dos acervos documentais privados dos presidentes da República e dá outras providências. Retrieved from http://www.planalto.gov.br/ccivil_03/LEIS/L8394.htm, on April 18, 2019.

Brasil (1999). Decreto 3.017/1999 –Serviço Nacional de Aprendizagem do Cooperativismo. Approves the Regulation of the National Service of Learning of Cooperativism – SESCOOP. Retrieved from http://www.planalto.gov.br/ccivil_03/decreto/D3017.htm, on September 30th, 2018.

Brasil (2001). Medida Provisória 2.168-40/2001 Serviço Nacional de Aprendizagem do Cooperativismo (Sescoop).Autoriza a criação do Sescoop, entidade de direito privado com o objetivo de organizar, administrar e executar o ensino de formação profissional, desenvolvimento e promoção social do trabalhador em cooperativa e dos cooperados.

Brasil (2001b). Emenda Constitucional Nº 32, de 11 de setembro de 2001. Altera dispositivos dos arts. 48, 57, 61, 62, 64, 66, 84, 88 e 246 da Constituição Federal, e dá outras providências. Retrieved from http://www.planalto.gov.br/ccivil_03/constituicao/Emendas/Emc/emc32.htm#art1, on April 19, 2019.

Brasil (2002). Código Civil Brasileiro. Lei 10.406 de 10 de janeiro de 2002. Retrieved from http://www.planalto.gov.br/Ccivil_03/leis/2002/L10406compilada.htm, on September 29, 2018.

Brasil (2009). Lei Complementar 130/2009 – Sistema Nacional de Crédito Cooperativo. Dispõe sobre o Sistema Nacional de Crédito Cooperativo e revoga dispositivos das Leis nos 4.595, de 31 de dezembro de 1964, e 5.764, de 16 de dezembro de 1971. Retrieved from http://www.planalto.gov.br/ccivil_03/leis/lcp/Lcp130.htm, on September 29, 2018.

Brasil (2012) Lei 12.690/2012 – Cooperativas de Trabalho. Dispõe sobre a organização e o funcionamento das Cooperativas de Trabalho; institui o Programa Nacional de Fomento às Cooperativas de Trabalho – PRONACOOP. Retrieved from http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Lei/L12690.htm, on September 29, 2018.

Brasil (2013). Decreto 8.163/2013 – Pronacoop Social. Institui o Programa Nacional de Apoio ao Associativismo e Cooperativismo Social (Pronacoop Social). Retrieved from http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/decreto/D8163.htm, on September 30th, 2018.

CFC (2001). Resolução CFC 920/2001 – Aspectos contábeis de entidades cooperativas. Aprova a Norma Brasileira de Contabilidade das Entidades Cooperativas (NBC T 10.8). Retrieved http://www1.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=2001/000920, on September 30th, 2018.

CFC (2005). Conselho Federal de Contabilidade. Resolução CFC 1.013/2005 – Entidades Cooperativas. Esclarece a interpretação técnica do Conselho de Contabilidade sobre critérios e procedimentos específicos de avaliação, de registro das variações patrimoniais e de estrutura das Demonstrações Contábeis e de informações mínimas a serem incluídas em notas explicativas, relativas à NBC T 10.8 – Entidades Cooperativas. Retrieved from http://www1.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=2005/001013, on September 30th, 2018.

CMN (2019). Conselho Monetário Nacional. Resolução 4.716, de 25 de abril de 2019. Retrieved from https://www.editoraroncarati.com.br/v2/Diario-Oficial/Diario-Oficial/RESOLUCAO-CMN-N%C2%BA-4-716-DE-25-04-2019.html, on April 26, 2019.

CRESOL (2019) Relatório Central Cresol Baser 2018. Retrieved from https://s3.amazonaws.com/site321-prod/documents/files/ae352d8cebdd641c36b262d929059e0a5207a8a0/original.pdf?1555331577, on April 24, 2019.

Dalacosta, Rosiane; Dias, Murillo de Oliveira; Meirelles; Marco Aurélio S. Soares (2019). The Process of Institutionalization of Training Practices: Brazilian Case on Credit Cooperative Cresol Baser In: International Journal of Management, Technology, and Engineering. Vol. IX, issue 4, pp. 2915-2929, April 2019. ISSN 2249-7455. DOI: 10.13140/RG.2.2.18650.18881

Dias, Murillo de Oliveira (2018) Evolution of Cooperative Societies in Brazil. In: International Journal of Community and Cooperative Studies, Vol.6 No.4, pp.1-11, November 2018.ISSN 2057-262X. DOI: 10.6084/m9.figshare.7834688

Dias, Murillo de Oliveira; Craveiro, F. M. (2019). Brazilian Agriculture Cooperative: Vinícola Aurora Case. In: International Journal of Management, Technology and Engineering. Vol. IX, issue 3, pp. 2551-2561, March 2019. ISSN 2249-7455. DOI: 16.10089.IJMTE.2019.V9I3.19.27743. DOI: 10.13140/RG.2.2.19829.01763

Dias, Murillo de Oliveira; Krein, Jeferson; Streh, Eder; Vilhena, João B. (2018) Agriculture Cooperatives in Brazil: Cotribá Case. In: International Journal of Management, Technology And Engineering, Volume 8, Issue XII, December/2018, ISSN: 2249-7455, pp. 2100-2110, DOI:16.10089.IJMTE.2018.V8I12.17.2243. DOI: 10.6084/m9.figshare.7834214

Dias, Murillo de Oliveira; Ramos Alambert R. Murilo (2018). Credit Cooperatives in Brazil. In: International Journal of Science and Research (IJSR). Volume 7 Issue 10, October 2018, pp. 598-603. ISSN: 2319-7064. DOI: 10.21275/ART20191901.DOI: 10.6084/m9.figshare.7834661

Dias, Murillo de Oliveira; Teles, Andre (2018). Agriculture Cooperatives in Brazil and the Importance for The Economic Development. In: International Journal of Business Research and Management (IJBRM), Volume (9): Issue (2), December 2018, pp.72-81.DOI: 10.6084/m9.figshare.7832354

Dias, Murillo de Oliveira; Teles, Andre (2019). A Comprehensive Overview of Brazilian Legislation on Credit Cooperatives. In: Global Journal of Politics and Law Research, Vol. 7, Issue 4, Mat 2019, pp. 1-12 -. ISSN 2053-6593. DOI: 10.13140/RG.2.2.25054.28488

Dias, Murillo de Oliveira; Teles, Andre (2019b) Credit Co-Operatives In Brazil: Sicredi Case. In: International Journal of Advanced Research. Volume 7, Issue 4, April 2019, pp. 194-202; ISSN: 2320-5407. DOI: 10.21474/IJAR01/8806. DOI: 10.13140/RG.2.2.35306.16327

Dias, Murillo et al. (2015). Brazilian Fashion Business Dudalina S/A: Case Revisited. In: International Journal of Business and Management Studies. ISSN: 2158-1479. Vol 04(01); p. 11-24. DOI: 10.6084/m9.figshare.7834730

Dias, Murillo et al. (2014). Dudalina S/A: Case Study on How to Overcome Succession Barriers on a Brazilian Family Business. In.Business and Management Review, vol 3, no. 12, special issue Brazil, ISSN 2047-0398, pp. 217-229. DOI: 10.6084/m9.figshare.7834748

Dias, Murillo et. al. (2014). FIAT and Chrysler in Brazil: Anatomy of an Alliance. In: International Journal of Business and Management Studies, vol.3(1), ISSN 2158-1479, pp 1-13. DOI: 10.6084/m9.figshare.7834739

Dias, Murillo, Navarro, R.; Valle, A. (2013). BMW and Brazilian Federal Government: Enhancing the Automotive Industry Regulatory Environment. In: International Journal of Arts and Sciences,, volume 06, number 02, pp.551-567. ISSN: 1944-6934. DOI: 10.6084/m9.figshare.7834742

Dias, Murillo, and Teles, Andre (2019). Boeing, Brazilian Federal Government, And Embraer: Golden Share Veto And The Anatomy Of A Joint Venture. In: International Journal of Business and Management Studies, CD-ROM. ISSN: 2158-1479 :: 07(02):71–80 (2018). DOI: 10.13140/RG.2.2.14972.18563

Dias, Murillo de Oliveira, and Falconi, Davi. (2018), The Evolution of Craft Beer Industry in Brazil. In: Journal of Economics and Business, Vol.1, No.4, 618-626.ISSN 2615-3726.DOI: 10.31014/aior.1992.01.04.55

Dias, Murillo de Oliveira (2018). Heineken Brewing Industry in Brazil. In: International Journal of Management, Technology And Engineering (IJAMTES) ISSN: 2249-7455. Volume 8 Issue 9, November/2018, Page No: 1304-1310. DOI:16.10089/IJMTE2156. DOI: 10.6084/m9.figshare.7834343

Dias, Murillo de Oliveira & Davila Jr., E. (2018) Overcoming Succession Conflicts in a Limestone Family Business In Brazil. In: International Journal of Business and Management Review Vol.6, No.7, pp.58-73, August 2018. ISSN: 2052-6407. DOI: 10.6084/m9.figshare.7834703

Dias, M., (2016). Factors Influencing the Success of Business Negotiations in the Brazilian Culture (Doctoral Thesis). ESC Rennes School of Business, France. DOI: 10.13140/RG.2.2.18660.22407

EMBRAPA – Empresa Brasileira de Pesquisa Agropecuária (2019). *Soja em números (safra 2017/2018)*. Retrieved from https://www.embrapa.br/web/portal/soja/cultivos/soja1/dados-economicos, on June 12, 2019.

FIESP - Federação das Indústrias do Estado de São Paulo (2019). *Safra Mundial de Milho (2019-2020).* Retrieved from https://www.fiesp.com.br/indices-pesquisas-e-publicacoes/safra-mundial-de-milho-2/attachment/file-20190516191800-boletimmilhomaio2019/, on June 12, 2019.
Fisher, R. Ury, W. and Patton, B (Editor). (1981). Getting to Yes: Negotiating an agreement without giving in. US: Random House.
Goffman, E. (1959). The presentation of self in everyday life. London: Peguin.
Goffman, E. (1961). Encounters: Two studies in the sociology of interaction. Indianapolis: The Bobbs-Merril Company.
ILO (2002). Recommendation 193. International Labour Organization. Retrieved from http://www.recma.org/sites/default/files/ILO_RECOMMENDATION_NO._193_ON_THE_PROMOTION_OF_COOPERATIVES.pdf, on September 30, 2018.
ILO (2018). Promoting Co-operatives, A guide to ILO Recommendation 193. Retrieved from https://www.ilo.org/global/docs/WCMS_160221/lang--en/index.htm, on September 30th, 2018.
International Co-operative Alliance (2018a). World Co-operative Monitor_ 2017_EN. Retrieved from https://monitor.coop/es/media/library/research-and-reviews/world-co-operative-monitor-2017en, on September 29, 2018.
MAPA (2019). Ministério da Agricultura, Agropecuária, Pesca e Abastecimento. *DAP - Modelos, Grupos e Status*. Retrieved from http://www.mda.gov.br/sitemda/dap/modelos, on June 12, 2019.
Moore, C.W. (1986). The Mediation Process: Practical Strategies for Resolving Conflict. San Francisco (California) and London: Jossey-Bass.
OCB (2018). Organização das Cooperativas do Brasil. Ramos do Cooperativismo. Retrieved from https://www.ocb.org.br/ramos, on September 30th, 2018.
Portal do Cooperativismo no Brasil (2018). Conheca as maiores instituicoes financeiras cooperativas do Brasil-base 2017. Retrieved from http://cooperativismodecredito.coop.br/2018/05/conheca-as-maiores-instituicoes-financeiras-cooperativas-do-brasil-base-2017/, on October 9, 2018.
Salacuse, J. (2003). The Global Negotiator. New York: Palgrave, Macmillan.
Saldaña, Johnny (2013).The Coding Manual for Qualitative Researchers. London: SAGE, 2nd Edition.
Sescoop (2017). Fundamentos do Cooperativismo. Organizadores: Serviço Nacional de Aprendizagem de Cooperativismo e Organização das Cooperativas Brasileiras, coordenadora Giuliana Fardini. Brasilia, DF: Sistema OCB – Série Cooperativismo.
Sicredi (2018) . Relatório de Sustentabilidade 2018. Retrieved from https://www.sicredi.com.br/html/conheca-o-sicredi/relatorios/arquivos/rs-sicredi_v10_digital.pdf, on April 7, 2019.
Sicredi Pioneira (2018). História. Retrieved from https://www.sicredipioneira.com.br/sicredi-pioneira-rs/conheca-o-sicredi/historia, on October 1st, 2018.
SPC (2019). Serviço de Proteção de Crédito. *Pesquisas.* Retrieved from https://www.spcbrasil.org.br/pesquisas, on June 3rd, 2019.
SPC (2018). Serviço de Proteção de Crédito. *Análise PF – Dezembro 2018.* Retrieved from file:///C:/Users/Murillo/Downloads/An%C3%A1lise-PF_Dezembro_2018.pdf, on June 3rd, 2019.
Thompson, Leigh (2015); The Truth about Negotiations. New Jersey: Pearson, 2nd. Edition.
Yin, R. (1988) Case Study Research: Design and Methods. Newbury Park, CA: Sage Publications.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 448-458
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.100

Research on Housing Price Factors of Zhuhai City：Under the background of the Opening of Hong Kong - Zhuhai - Macao Bridge

Jia-Yan Zhou[1], Wen-Tsao Pan[1], Mei-Er Zhuang[1]

[1] School of Business, Guangdong University of Foreign Studies, Guangzhou, 510006, China

Correspondence: Wen-Tsao Pan. Email: teacherp0162@126.com

Abstract
The completion and opening of the Hongkong-Zhuhai-Macao Bridge not only strengthened the links between different cities in the Pearl River Delta region but also greatly promoted economic exchanges between Hong Kong and Macao and the Mainland. In theory, the facilitation of traffic conditions can drive economic development around it, especially in the area of real estate, which may have a regional housing price convergence effect. Taking Zhuhai real estate industry as the research object, this paper selects 39 communities in Xiangzhou District (including Hengqin New District) as samples, based on the Hedonic model. And through the method of Equal Part Linear Regression Model to establish the functional relationship between the housing price of Zhuhai and the location factors, neighborhood factors and other influencing factors, to find out the main factors affecting Zhuhai housing prices after the opening of the Hong Kong-Zhuhai-Macao Bridge. The results show that for the Xiangzhou District of Zhuhai, the distance from the sea is an important factor affecting housing prices, showing a significant negative correlation. However, other general factors affecting house prices play a relatively small role.

Keywords: Hong Kong-Zhuhai-Macao Bridge, Real Estate Industry, Zhuhai, Hedonic Model, Equal Part Linear Regression Model

1 Introduction

Since the opening of the Hong Kong-Zhuhai-Macao Bridge, the housing prices in Zhuhai has been closely watched by the local government and the public. Price theory believes that the factors affecting housing prices work through the relationship between supply and demand. The market price is actually the equilibrium price corresponding to the intersection of the supply curve and the demand curve. Many scholars at home and abroad also use this theory to analyze the factors affecting housing prices. Huang Houxia and Hou Liying (2010) believe that from the point of view of demand, the fluctuation of housing prices is mainly affected by factors such as economy, population, finance, psychology, leasing, and macroeconomic regulation. And from the perspective of supply, the factors affecting housing price fluctuations mainly include Location, real estate brand, and housing supply structure[1]. Specifically, some scholars use Factor Analysis to conclude that economic factors are the major factors affecting housing prices (Li Chen, 2010)[2]. Zhang Jiaping (2008) pointed out that the real exchange rate of RMB positively affects housing prices by establishing a cointegration model[3]. From a cost perspective, land price are an important component of housing prices. Yan Lei (2011) used the panel data analysis from 1997 to 2008 to obtain a significant positive correlation between house prices and land prices[4]. However, there are domestic scholars, such as Yao Xianguo and Huang Yuhua (2001), who have proposed that there is no direct linear correlation between land prices and housing prices[5]. Of course, in addition to supply, demand and cost, property management, building materials, and other factors also play a decisive role in housing prices. Jin Xiaobin, Yin Shaomei, Yin Xiaoning, and Zhou Yikang (2004) pointed out that housing prices will be affected by factors such as population changes and government policy regulation[6]. Han Yi (2004) believes that property management affects the prices in the primary real estate market by transmitting information about corporate projects to consumers[7]. Feng Wen and Wu Hao (2006) pointed out that the main building materials will affect housing prices[8]. Generally speaking, there are many academic studies on housing prices, many of which have conducted in-depth analysis and exploration of different factors affecting housing prices.

With regard to the impact of the Hong Kong-Zhuhai-Macao Bridge on real estate in Zhuhai, the research literature related to housing prices is still scant. In the existing literature, Zhang Huawei (2016) believes that with the opening of the Hong Kong-Zhuhai-Macao Bridge, Zhuhai's real estate products will move towards diversification, and the proportion of foreign visitors will be large and larger. At the same time, he also pointed out that the demand for the real estate market in Zhuhai will continue to increase, especially for commercial buildings, which will bring more economic benefits to the market[9]. Chen Zhangxi and Mao Yan (2018) reached the following conclusions by constructing a real-estate spatial interaction model between Hong Kong, Macao, and Zhuhai: After the opening of the Hong Kong-Zhuhai-Macao Bridge, the spatial interaction between the two will increase significantly. Among them, Zhuhai has a large influence and influence range, and it is more attractive to Hong Kong residents than Macao[10]. Undoubtedly, the opening of the Hong Kong-Zhuhai-Macao Bridge has shortened the time and space between Hong Kong, Macau, and Zhuhai, enhancing the location and social and economic development of the three. Coupled with a beautiful and livable environment, Zhuhai's housing prices and market demand should be improved.

Real estate has a high heterogeneity, which means that even at the same time, housing prices will be different, due to location, policy, neighborhood characteristics, and other factors. In order to explore the effect of different real estate characteristics on Zhuhai's housing prices, this paper selects the second-hand data of residential areas in Xiangzhou District (including Hengqin New District) in Zhuhai City in 2018, and uses the equal part linear regression method proposed by Pan Wenchao (2017) for data analysis, so as to obtain the difference in the impact of different real estate characteristics on housing prices since the opening of the Hong Kong-Zhuhai-Macao Bridge[11].

2 Research Method

2.1 Equal Part Linear Regression

In this paper, we adopt the Multiple Equal Part Linear Regression Model (EPLRM) which proposed by Pan Wenchao (2017) [10]. It can divide the analysis data into several equal parts and build the linear regression model, respectively. In this way, the trend of each equal parts can be independently observed. Also, it can be compared with the standard linear regression. By using this method, we can learn that whether there will be undervalued or overvalued if using least square regression analysis and find out the real factors that influence the real estate price.

2.1.1 Equal Part Linear Theory

Assume Y is a continuous dependent variable dependent on X. The analysis data is divided into several equal parts and built a fit linear regression model for the different equal parts. These three linear regression equations can be expressed as:

$$y_i = \beta_0 + \beta_1 x_i + \varepsilon_i$$

The error term ε_i obeys a normal distribution with a mean μ of 0 and a standard deviation σ^2 of 2. Since linear regression is based on the least squares method to minimize the sum of squared deviations, it can be written as:

$$\min \sum_i [y_i - (\beta_0 + \beta_1 x_i)]^2$$

The values of β_0 and β_1 can be solved according to the standard equation. The specific results are as follows:

$$\widehat{\beta}_0 = \frac{\sum_{i=1}^{n}(x_i - \overline{x})(y_i - \overline{y})}{\sum_{i=1}^{n}(x_i - \overline{x})^2}$$

$$\widehat{\beta}_1 = \overline{y} - \overline{\beta}_0 \overline{x}$$

The closeness of the linear regression model to each observation point is called the goodness of fit of the linear regression model and the data, while the judgment coefficient R^2 is a measure of the goodness of fit. The calculation formula is:

$$R^2 = \frac{\sum_{i=1}^{n}(y_i - \overline{\overline{y}})^2}{\sum_{i=1}^{n}(y_i - \overline{y})^2}$$

The value range of R^2 is [0, 1], and the larger the R^2 is, the better the goodness of fit of the regression model is, that is, the more the part of the Y value is explained by the change of X. When R^2=1, the sum of the squares of the regression is equal to the sum of the squares, indicating that the regression model has no residuals and is completely suitable. When R^2=0, the sum of squared residuals is equal to the sum of squares, indicating that the regression model has no explanatory power for Y.

The confidence interval for β_1 at the confidence level of (1-α) is:

$$\left(\widehat{\beta}_i - t_{\alpha/2} \times s_{\widehat{\beta}_i}, \widehat{\beta}_i + t_{\alpha/2} \times s_{\widehat{\beta}_i}\right), i = 0, 1$$

Different from the general linear regression model, the equal part linear regression model divides the data into " τ equal parts and performs regression modeling separately, as shown in Figure 1:

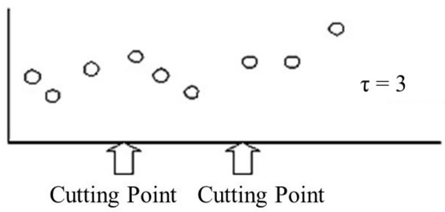


Figure 1 3 Equal Part Linear Regression Models

In this figure, the linear data is divided into 3 equal parts, and there exist 3 sample data points in each equal part. Because there are different trends in the data of the three sample points in each equal part, prediction or analysis using standard linear regression may result in distortion. The equal part linear regression formula is:

$$y_i^\tau = \beta_0^\tau + \beta_1^\tau x_i^\tau + \varepsilon_i^\tau$$

The minimum evaluation formula is:

$$\widehat{\beta}_0^\tau = \frac{\sum_{i=1}^{n}(x_i^\tau - \overline{x}^\tau)(y_i^\tau - \overline{y}^\tau)}{\sum_{i=1}^{n}(x_i^\tau - \overline{x}^\tau)^2}$$

$$\widehat{\beta}_1^{\ \tau} = \overline{y}^\tau - \overline{\beta}_0^{\ \tau} \overline{x}^\tau$$

Decision coefficient and confidence interval:

2.1.2 Equal Part Linear Regression Coefficient and Confidence Interval

The equal parted linear regression models the equal part sample point data from left to right and records the coefficients and confidence intervals of the regression, as shown in picture 2:

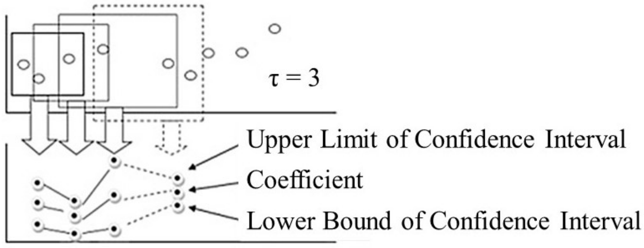


Figure 2 3 Equal Part Linear Regression Lines and Confidence Intervals

3 Data and Model

3.1 Research Material

This paper takes Zhuhai's residential community as the research object. Because the Xiangzhou District (including Hengqin New District) is geographically close to the Hong Kong-Zhuhai-Macao Bridge, it is greatly affected by the Hong Kong-Zhuhai-Macao Bridge. Therefore, this paper selects the new real estate opened in Xiangzhou District in recent years as sample data. The sample data mainly comes from the real estate information website of Fangtianxia Real Estate Network and anjuke.com, and the price of each property is taken as the average price in October and November of 2018.

3.2 Research Model

3.2.1 Characteristic Price Model

The characteristic price method considers that housing prices are determined by different attributes and the utility that people obtain from the attributes. The additional cost that a consumer is willing to pay for each unit of an attribute of a property is the implied price (characteristic price) of that attribute, which indicates how much each attribute contributes to the price. Butler theory holds that the price of real estate is mainly influenced by three characteristic variables: location characteristics, neighborhood features, and architectural features.

The function of the characteristic price model known as Hedonic model is:

$$P = f\left(X_1, X_2, X_3, \ldots\ldots, X_n\right)$$

In practical applications, it can be turned into a linear form, where P represents the characteristic price, X_n represents the characteristic variable of the residential cell, α is a constant term, and ε is an error term:

$$P = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots\cdots + \beta_n X_n + \varepsilon$$

3.2.2 Selection and Quantification of Variables

The variables selected in this paper and their quantification are shown in Table 1.

Table 1 Quantification of Selected Variables

	Characteristic Variable	Quantification of Variables
Location Characteristic Variable	Distance from Hong Kong-Zhuhai-Macao Bridge	Actual distance from the property to the Hong Kong-Zhuhai-Macao Bridge (km)
	Distance from the sea	The actual distance from the property to the nearest sea area (km)
	Traffic condition	The number of traffic lines within 500 meters around the property
	Time required to drive to Hong Kong-Zhuhai-Macao Bridge	Usually, the actual time required to drive from the property to the Hong Kong-Zhuhai-Macao Bridge (min)
Neighborhood Characteristic Variable	Commercial, hospital and educational facilities	The cultural, sports and educational facilities within 1,000 meters around the property, including supermarkets, restaurants, entertainment, banks, parks, kindergartens, primary schools, junior high schools
Architectural Characteristic Variable	Community size	The total floor area of the entire property (m^2)
Other Variables	Developer visibility	According to the ranking of "2018 Zhuhai Real Estate Development Company" from zhuhai.anjuke.com and "2018 China Real Estate Top 500."

4 Empirical Analysis

4.1 Graph Analysis

In the empirical analysis, this article takes the housing price as the dependent variable and discusses the impact of these seven variables on the price: the distance from the Hong Kong-Zhuhai-Macao Bridge, the distance from the sea, the commercial, hospital and educational facilities, traffic conditions, community size, developer visibility and the time required to drive to Hong Kong-Zhuhai-Macao Bridge. In this paper, 39 real estates in Xiangzhou District of Zhuhai City were selected as samples, and the data were subjected to three-equal-part regression analysis. The results show that two variables have a significant impact on the housing prices in Xiangzhou District, including the distance from the sea and commercial, hospital and educational facilities. The distance from the Hong Kong-Zhuhai-Macao Bridge, the traffic situation, the popularity of the developers and the time required to drive to the Hong Kong-Zhuhai-Macao Bridge also has a certain impact on the housing prices in Xiangzhou.

Cutting 39 data points into 3 equal parts. There are 13 data in each equal part, and then a simple regression analysis is performed after moving a piece of data from left to right, and the regression coefficient and confidence interval are recorded. After moving to the far right, the recorded data is plotted in Figure 3. The results of the equal part linear regression are organized into Table 2, from left to right: the statistical value of the standard multiple linear regression (LRM), the first equal part of the equal part linear (EPLRM $\tau = 1$), the second equal part (EPLRM $\tau = 2$), third equal part (EPLRM $\tau = 3$) statistics. From left to right, the heading lines are: the statistical value of the standard multiple linear regression (LRM), the first equal part of the equal part (EPLRM τ=1), the second equal part (EPLRM τ=2), and the third equal part (EPLRM τ=3). According to the analysis results of standard multiple linear regression, the constant term and X2 (the distance from the sea) all reach 99% significant level, which means that X2 has significant explanatory power for Y. Since the regression coefficient is negative, the distance from the sea has a significant negative impact on the housing prices of Xiangzhou District. The difference of the three equal part linear regression coefficients was subjected to F-value test, and the results were compiled into Table 3. It can be found that in the first equal part and the second equal part, the linear regression coefficients of X1, X2, and X6 are significantly different; in the first equal part and the third equal part, the linear regression coefficients of X2, X3, X6, and X7 have significant differences; in the second and third divisions, the linear regression coefficients of X1, X3, and X5 are significantly different.

Combined with the above-mentioned chart, this article lists the following analysis results:

For X1, the distance from the Hong Kong-Zhuhai-Macao Bridge, the results of the operation according to Table 3 shows that there is a significant difference in the impact of the low price range and the mid-price range on the housing prices. It can be seen from Figure 3 that the distance from the Hong Kong-Zhuhai-Macao Bridge to the house price (Y) in the mid-price range is greater than its impact on house prices in the low-price range. In addition, according to the results of Table 3, it is also known that the impact of the Hong Kong-Zhuhai-Macao Bridge on the prices of the mid-price range is significantly different from that in the high-price range. It can be seen from Figure 3 that X1 is underestimated if it is estimated by standard linear regression in the mid-price range, while partially overestimated in the high-price range. Therefore, on the whole, the influence of X1 on housing prices in the mid-price range is greater than the impact on housing prices in the high-price range. According to Table 2, the regression coefficient of X1 at the mid-price level is a positive number, indicating that for the mid-priced real estates, the farther away from the Hong Kong-Zhuhai-Macao Bridge, the higher the housing price. The regression coefficient of X1 at low-price and high-price level is negative, indicating that for low-priced and high-priced real estates, the closer the distance from Hong Kong-Zhuhai-Macao Bridge, the higher the housing prices.

For the variable X2, that is, the distance from the sea, according to the results of Table 3, the effect of the housing prices is significantly different in the low-price range and the mid-price range. It can be seen from Figure 3 that when X2 is in the mid-price range, if the standard linear regression is used to estimate that there will be partial underestimation, and in the low-price range, there will be more overestimation, indicating that effect of the distance from the sea in the low-price range on the housing prices is less than that in the mid-price range. In addition, the impact of the distance from the sea on housing prices is also significantly different in the low-price range and the high-price range. It can be seen from Figure 3 that X2 has more underestimation in the high-price range, indicating that the impact of X2 on housing prices at the high-price level is greater than that at the low-price level. Finally, as can be seen from Table 2, the regression coefficients of X2 at the low, medium and high price levels are all negative, indicating that for each price of real estate, there is a relationship showing the closer the distance from the sea, the higher the housing prices.

For the variable X3, that is, commercial, hospital, and educational facilities, if standard linear regression is used to estimate, there will be underestimation at the low, medium, and high price levels. Therefore, it can be considered that commercial, hospital, and educational support have a greater impact on housing prices. At the same time, as can be seen from Table 3, the impact of X3 on housing prices is significantly different in the low-price range and high-price range, and the impact on housing prices is also significantly different at the mid-price level and the high-price level. Combined with Figure 3, it can be seen that the impact of X1 on housing prices at the high-price level is greater than that at the low-price level, meanwhile, the impact of X3 on housing prices at the high-price level is also greater than that at the mid-price level. Finally, according to Table 2, the coefficients of X3 in the low-price range and the mid-price range are negative, indicating that for the low-priced and mid-priced real estates, the more commercial, hospital and educational facilities, the lower the housing prices. On the contrary, the regression coefficient of X3 at the high-price level is a positive number, indicating that for high-priced real estates, the more commercial, hospital and educational facilities, the higher the housing prices.

X4, the traffic condition, has no significant difference in linear regression coefficients between the three equals. If the standard linear regression is used to estimate, there will be an underestimation, indicating that the traffic situation will have a greater impact on the housing prices in Xiangzhou District. According to the different linear regression coefficients in the three equal parts, it can be concluded that the traffic condition has a negative impact on the prices of low-priced and high-priced real estates, and positively affects the price of mid-priced real estates. Because in the standard linear regression and the equal part linear regression, the coefficients of X5, the community sizes, are all 0, indicating that the community size has no explanatory power for the housing price of Xiangzhou District.

According to the translation model, X6, the developer visibility, is underestimated in three equal parts, indicating that the developer visibility has a greater impact on the housing prices in Xiangzhou District. According to the regression coefficient of Table 2, the popularity of the developer has a negative impact on the housing prices of the low-priced and high-priced real estates, and a positive impact in the mid-price range. In addition, X6 has a significant difference in the impact on housing prices at the low-price level and the mid-price level. In combination with Figure 3, it can be seen that the underestimation of X6 at the mid-price level is significantly greater than that at the low-price level, so the influence of the developer visibility on housing prices of mid-priced real estates is greater than that of low-priced real estates.

X7, the time required to drive to the Hong Kong-Zhuhai-Macao Bridge, is underestimated in three equal parts, indicating that the time required to drive to the Hong Kong-Zhuhai-Macao Bridge has a greater impact on the housing prices in Xiangzhou District. According to the different linear regression coefficients in the three equal parts of Table 2, it can be concluded that the time required to drive to the Hong Kong-Zhuhai-Macao Bridge has a positive impact on the housing prices of low-priced and high-priced real estates, and a negative impact on the housing prices of mid-priced real estates. In addition, the regression coefficient of X7 is obviously different between the low-price level and the high-price level. It can be seen from Figure 1 that the underestimation of X7 at the high-price level is greater than that at the low-price level, that is, the impact of time required to drive to Hong Kong-Zhuhai-Macao Bridge on high-priced properties is greater than that on low-priced properties.

Table 2 Results of Equal Part Linear Regression

	LRM R^2=0.493			**EPLRM τ=1 R^2=0.691**			**EPLRM τ=2 R^2=0.628**			**EPLRM τ=3 R^2=0.617**		
Stat.	Conf.	T	Sig.	Conf.	T	Sig.	Conf.	T	Sig.	Conf.	T	Sig.
X1	-209.93	-0.56	-	-295.85	-1.18	-	70.99	0.36	-	-605.49	-0.83	-
X2	-1422.76	-2.78	***	-563.86	-2.03	*	-748.00	-1.43	-	-963.51	-0.46	-
X3	-47.03	-0.60	-	-82.94	-1.78	-	-106.04	-2.23	*	286.78	1.56	-
X4	-136.49	-0.81	-	-22.71	-0.15	-	73.77	0.69	-	-148.37	-0.47	-
X5	0.00	0.15	-	0.00	-0.51	-	0.00	1.11	-	0.00	-0.32	-
X6	-128.62	-1.16	-	-95.00	-0.99	-	16.74	0.23	-	-167.33	-0.72	-
X7	-262.53	-1.23	-	8.97	0.06	-	-102.11	-0.84	-	195.02	0.47	-

Note: Conf. indicates the regression coefficient, T indicates the t-value, and Sig. indicates the significance.
* indicates a 90% significant level, ** indicates a 95% significant level, and *** indicates a 99% significant level.

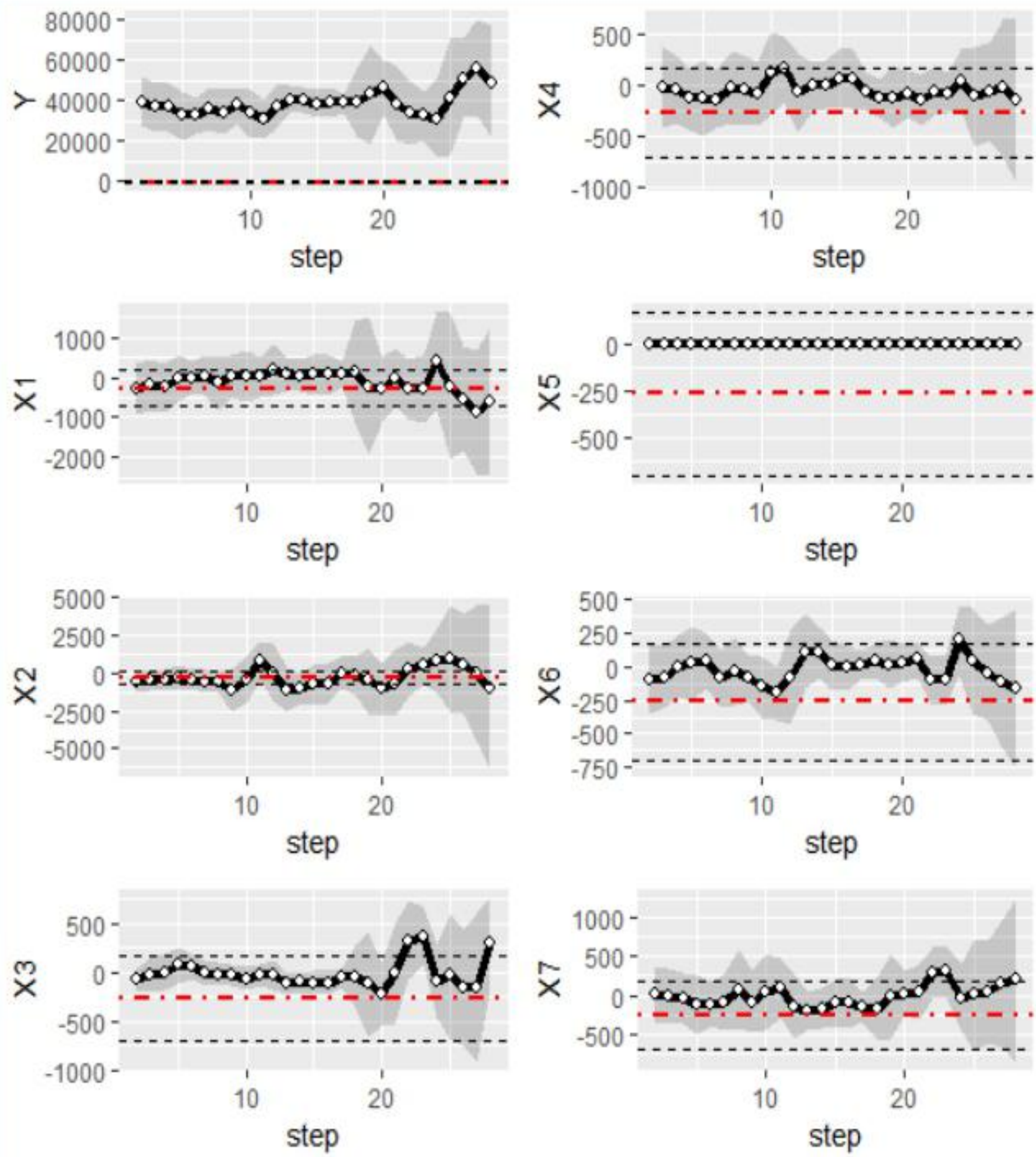


Figure 3 Results of Translation Modeling

Note: The corresponding relationship of each variable is X1 (the distance from Hong Kong-Zhuhai-Macao Bridge), X2 (the distance from the sea), X3 (commercial, hospital and educational facilities),X4 (traffic condition), X5 (community size), X6 (developer visibility), X7 (time required to drive to Hong Kong-Zhuhai-Macao Bridge)

Table 3 F-value test results of three equal part linear regression coefficient differences

Variable	τ1-τ2		τ1-τ3		τ2-τ3	
	F-value	Sig.	F-value	Sig.	F-value	Sig.
Constant term	0.451	—	0.154	—	0.342	—
Distance from Hong Kong-Zhuhai-Macao Bridge	9.030	*	0.536	—	0.059	**
Distance from the sea	0.008	***	0.008	***	1.009	—
Commercial, hospital and educational facilities	1.326	—	0.031	**	0.023	**
Traffic condition	0.326	—	2.289	—	7.028	—
Community size	4.601	—	0.242	—	0.053	**
Developer visibility	0.054	**	0.115	*	2.115	—
Time required to drive to Hong Kong-Zhuhai-Macao Bridge	0.179	—	0.045	**	0.252	—

Note: Conf. indicates the regression coefficient, T indicates the t-value, and Sig. indicates the significance.
* indicates a 90% significant level, ** indicates a 95% significant level, and *** indicates a 99% significant level.

4.2 Cause Discussion

The distance from the sea has a significant negative impact on housing prices. According to the results of the simple regression, the closer the house is to the sea, the higher the price. However, according to the results of the equal part linear regression, the impact of the distance from the sea to the mid-priced real estate (￥32000-37000 / square meter) is not significant, because in this case, compared to the mid-to-high price of real estate, the price difference of the mid-priced real estate is small, and the distance from the sea is mostly between 0.3 and 1 km, so the impact of the distance from the sea on housing prices is not obvious. For high-priced real estate (more than ￥ 37,000 / square meter), the distance from the sea has a greater influence on housing prices. Because of the large price difference between high-priced properties, the overall situation shows that the higher the distance from the sea, the higher the housing prices, and the change between 50-500 meters from the sea is obvious. This is also in line with the general rule of the high price of sea view rooms. However, in this case, the reason why the distance from the sea does not significantly affect the house price may be a special phenomenon for some high-priced properties, such as Gree Coast and Hengyu Ink Orchid Pavilion, that is, the distance from the sea is small but the house price is low, or the distance from the sea is large, but the house price is high.

In the past studies on the factors affecting housing prices, many scholars found that traffic conditions are one of the important factors affecting housing prices. However, in this example, according to the results of simple regression and equal part linear regression, the influence of the number of bus lines on house prices is not significant, and there is no difference in the influence of real estate at various price points. This article believes that this may be caused by the following reasons:

Figure 4 Xiangzhou District Map

Xiangzhou District, the core city of Zhuhai, is located on the east bank of Zhuhai City. The transportation network in Xiangzhou District extends in all directions, and after the opening of the Hong Kong-Zhuhai-Macao Bridge, Xiangzhou District has closer ties with Hong Kong and Macao. Xiangzhou District has advantages in technological innovation, investment potential, and ecological industry. It can be seen that Xiangzhou District has a higher economic level than other areas in Zhuhai. In addition, relevant data show that the average housing price in Zhuhai in Xiangzhou District in October and November 2018 was ￥24021 / square meter, while the average housing price in Xiangzhou District reached ￥36,707 / square meter, showing that the price level in Xiangzhou District is much higher than the average housing price of Zhuhai City. Therefore, this paper believes that under such a background, traffic conditions cannot be the main factor affecting Xiangzhou's housing prices.

According to the existing research, the better the traffic conditions in the vicinity, the higher the housing price. But the data in this article do not show such a pattern. As shown in Figure 1, there are many coastal areas in Xiangzhou District, where a lot of high-priced properties are distributed. The coastal routes only have a road name *couple*, so the high-priced real estate bus lines near Couple Road are less than other real estates. But such a traffic disadvantage does not affect its higher housing prices, such as Huafa International Coastal Garden, Gree Coast, Renheng Coast Center, etc. Therefore, in this case, for many properties, there is no negative correlation between the number of bus lines and housing prices.

In addition, the analysis results of this paper show that there is no correlation between the size of the community and the price level. In the data, the construction area of Cuihu Xiangshan Apartment is as high as 780000 square meters, but its housing price is only ￥28,000 / square meter, far lower than the average price of the district. The construction area of CITIC Mangrove Bay is similar to that of Cuihu Xiangshan Apartment, however, its housing price is as high as ￥47,500 / square meter. As in the above situation, there are many examples of similar building areas but large price gaps. It can be seen that the size of the community does not affect housing prices.

5 Conclusion and Research Limitations

5.1 Conclusion

Based on the above research results, the paper draws the following conclusions:

1. For Zhuhai Xiangzhou District, the distance from the sea is an important factor affecting housing prices. Sea

view rooms often have high prices.

2. Due to its special geographical advantage and important economic status, the factors that generally affect housing prices may change when affecting properties in Xiangzhou District.
3. The distance from the Hong Kong-Zhuhai-Macao Bridge, traffic conditions, developer awareness, and the time of driving to the Hong Kong-Zhuhai-Macao Bridge also have a certain impact on the housing prices in Xiangzhou.

5.2 Limitations and Recommendations

The sample size of this paper is small, and it is greatly affected by the data of some special buildings, which may be the reason why some variables are not significant. In addition, this article only studies the real estate data of Xiangzhou District, so the research results can not show how various factors affect the prices of Zhuhai City. Finally, this article only selects the housing price data on October and November 2018. Therefore, the time span of the data is small, which does not reflect whether there is any change in the housing prices before and after the completion of the Hong Kong-Zhuhai-Macao Bridge.

This paper has the following recommendations for related research in the future:

1. The geographical scope can be expanded while When studying the impact of the Hong Kong-Zhuhai-Macao Bridge on housing prices. For example, it can be analyzed whether the expressway connected to the Hong Kong-Zhuhai-Macao Bridge will affect housing prices in Doumen District, Jinwan District, or other neighboring areas.
2. Subsequent research can pay more attention to the time span and compare the housing price data before and after the completion of the Hong Kong-Zhuhai-Macao Bridge.

References

[1] Huang Houxia, Hou Liying. Summary of Housing Price Factors[J]. China Real Estate, 2011(14): 39-44.
[2] Li Chen. Analysis of Factors Affecting China's Housing Price Based on Factor Analysis[J]. Economic Research Guide, 2010(16): 158-159.
[3] Zhang Jiaping. Empirical Study on the Relationship between RMB Exchange Rate Changes and Real Estate Price[J].南金融, 2008(4):14-16.
[4] Yan Lei. Analysis of Factors Affecting Real Estate Price: An Empirical Study Based on Panel Data from 1997 to 2008 [J]. Business Culture (2nd Half Month), 2011(1): 140.
[5] Yao Xianguo, Huang Yuhua. Relationship between land price and house price[J]. China Land, 2001(9): 33-35.
[6] Jin Xiaobin, Yin Shaomei, Yin Xiaoning, Zhou Yikang. Research on System Dynamics of Urban Housing Industry Development——Taking Nanjing as an Example[J]. Journal of Nanjing University(Natural Science), 2004(06): 760-768.
[7] Han Yi. A Brief Discussion on the Impact of Property Management on Real Estate Price[J]. Urban Development, 2004(8): 82-83.
[8] Feng Wen, Hu Wei. Analysis of the Influence of Price Change of Main Building Materials on Housing Price[J]. Construction, 2006, 28(1): 76-78.
[9] Zhang Huawei. Research on the Impact of Hong Kong-Zhuhai-Macao Bridge Construction on Zhuhai Real Estate Industry [J]. Southern Economy, 2014(7): 120-124.
[11] Pan W. A Newer Equal Part Linear Regression Model: A Case Study of the Influence of Educational Input on Gross National Income.Eurasia Journal of Mathematics, Science, and Technology Education. 2017;13(8):5765-5773.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 459-468
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.101

Measuring the Scale Efficiency of Agricultural SMEs Exporting in Vietnam

Trịnh Thị Thu Hằng[1]

[1] University of Economics and Business, Vietnam National University. Email: hangtrinh@vnu.edu.vn / trinhhangtlu@gmail.com. Mobile: +84901.28.28.28

Abstract

The paper uses data envelope analysis model to measure the scale effect of agricultural SMEs exporting in Vietnam in the period of 2010 - 2015 and use the Tobit regression model to assess the impact of factors such as region, domain, inventory, salary, capital, tax to affect the scale of enterprises in research. Results from the model show that in the 2010-2015 period, the number of enterprises reaching the optimal scale is very small. Businesses operating at the increasing return to scale accounted for more than 90%. In addition, enterprises operating in an efficient scale are mainly in the Southern region, factors such as wages/labor and capital/labor ratio have a positive impact and tax and survival factors. The warehouse has a negative impact on the scale efficiency of businesses. Since then, the author analyzes and draws conclusions and some policy recommendations for the Government and small and medium-sized agricultural exporters.

Keywords: Data Envelopment Analysis (DEA), Tobit Regression, Scale Efficiency, Small Medium Enterprise, Export Agricultural Products.

1. Introduction

The term "scale efficiency" is mentioned a lot in economics, which is a concept that shows the level of efficiency when businesses change the scale of operations. When businesses make decisions operate with how much inputs and outputs, they will encounter 3 situations: scale efficiency: achieved when the amount of input increases n times and the output increases more than n times; non-effective scale: achieved when the input volume increases n times and the output increases less than n times; Constant effect on scale: achieved when the input volume increases n times and the output also increases to n times.

Evaluating scale efficiency by the econometric model is a relatively new assessment of efficiency in Vietnam. Currently, most researchers around the world use quantitative methods to measure the scale efficiency of businesses or industries by two econometric models, the data envelope model (DEA) and Random boundary analysis parametric model (SFA). In particular, DEA model is most commonly used due to the flexibility of using input and output variables, including the flexibility of the number of variables. Therefore, the author selected the DEA model to evaluate the efficiency of small and medium-sized exporters in the agricultural sector. From that assessment, the author has a basis to come up with measures to improve the efficiency of the scale of businesses in the industry, contributing to promoting the development of agricultural exports in Vietnam. The selection of small and medium-sized exporters in the agricultural sector for research is explained by a number of reasons. Firstly, in Vietnam, small and medium enterprises play a very important role in the economy. According to the General Statistics Office (2015), among the total number of enterprises in the country, SMEs account for nearly 98% of enterprises, employing nearly 60% of the labor force, producing more than 40% of consumer goods and contributing 47% of GDP and 40% of the State budget. The proportion of exports of small and medium enterprises accounts for 25% of the total export turnover of the whole country; investment of this sector accounts for about 35% of the total social investment capital; contributing 40% of GDP; 30% of the total state budget revenue (state budget); For many countries around the world, including developed countries, the role of small and medium enterprises is still highly appreciated.

According to data published by the European Commission (EC), the number of small and medium enterprises accounts for the absolute majority in the total structure of enterprises, usually from 90% - 98%. In EU countries, about 90%, in the US: 98%, in the Asia-Pacific region: 96%, in Japan: 98% and in Vietnam is about 98%. The number of employees that small and medium enterprises use is also quite large. In the Asia-Pacific region, small and medium-sized enterprises employ over 60% of workers, about 75% in Japan. The contribution of small and medium enterprises to economic growth is quite high. In the EU region, these businesses generate about 65% of total sales; in the US, it is over 50% of the total GDP. In Vietnam, small and medium enterprises also use a lot of labor, especially local and rural workers (accounting for nearly 60%). The importance of small and medium-sized enterprises is undeniable. Among them, many businesses have the potential to become large-scale businesses and operate much more efficiently. To motivate these businesses to expand their production scale appropriately, the Government needs to take effective measures to support them. These specific measures will be discussed in more detail in the study. Secondly, Vietnam's agricultural exports are considered to be key points in the country's priority export policies. The export of agricultural products contributes significantly to the accumulation of capital for the industrialization process of the country, settling jobs for workers, reducing the trade deficit, reducing stress in the balance of bars. Math as well as foreign currency demand. The export of agricultural products directly affects the lives of farmers in many ways. With exporting, a surplus of agricultural products on the domestic market will be resolved, re-establishing supply and demand relations at higher prices, farmers not only sell agricultural products but also sell prices. This activity makes farmers have a higher income, thereby increasing the purchasing power of the population in the vast rural market with the majority of the population. This is a driving force behind the domestic production process. Moreover, the export of agricultural products will maximize the advantage of Vietnam in terms of climatic conditions, national resources, human resources ... New economies such as farm economy, small-scale rubber, voluntary cooperative groups, new-style cooperatives ... the export of agricultural products become more important than ever, and this activity will contribute an important part to promote new economic models to develop. It can be said that agricultural exports are also an advantage of Vietnam with more than two-thirds of the population living in rural areas, nearly 50% of workers working in the agricultural sector, contributing nearly 20% to GDP, approximately 17% of total export turnover. The labor rate of the sector accounts for nearly 50% of the total number of employees in the country, particularly agricultural exports account for nearly 18% of the total export value (OECD (2015)). In 2016, agriculture accounted for 13% of GDP, 45% of jobs, and 20% of exports (according to the General Statistics Office). The role of agricultural exports is very clear, and in order to carry out export activities, the importance of export enterprises in the industry must be mentioned. These businesses can be export processing enterprises or trading in agricultural products. Most of these enterprises in Vietnam are operating at small and medium scale. Third, these small and medium-sized enterprises face many obstacles in increasing the scale of operations. These are policies that support the expansion of production scale, and businesses themselves need to have awareness in governance about when to expand their scale. In addition, government policies need to focus more on factors that affect the scale efficiency of businesses. Therefore, it is necessary to have an assessment through the econometric model to quantify and increase the persuasion of the efficiency of the scale of enterprises. The econometric model will only show how these businesses operate, effective or ineffective by scale. At the same time, it is also possible to point out the factors that have positive or negative impacts on the scale of business activities. Since then, the author has analyzed to make conclusions more reliable, and the solutions given will be more convincing.

2. Methodology

Data Envelopment Analysis (DEA) was first introduced in 1978 by Charnes, A., Cooper, WW, and Rhodes, E. This model was developed from Farrell's technical efficiency measures in 1957. DEA is Non-parametric methods can solve a problem with multiple inputs and multiple outputs at the same time, this method focuses on determining the relative best operating boundary, not focusing on the characteristics of the middle trend. So it can identify the potential that Decision-making units (DMUs) are ineffective can improve efficiency. Currently, the DEA model is widely used when measuring or determining the efficiency or scale of business performance.

Purwanto (2014) publishes the research "Efficiency of Small- and Medium-sized Tofu Enterprises (SME) in Salatiga using Data Envelopment Analysis (DEA)" (Using data envelope analysis method for the effectiveness of businesses small and medium enterprises produce tofu in Salatiga). Main content: the rise of the US dollar price against the Rupee in September 2013 has affected all industries in Indonesia, especially tofu businesses. Increasing raw material prices is a big challenge for businesses. DEA analysis helps to assess the productivity of small and medium enterprises (SME) relatively. These samples are from 31 of 66 small and medium tofu businesses in Salatiga. The results show that 4 of the businesses selected for research have scale efficiency, 8 are technically efficient, and 23 are ineffective. Thus, in order to increase the productivity of these enterprises, it is necessary to reduce the input factor and maximize the output factor.

S. Azra Batool (2011) published the article "The Performance and Structure of Small & Medium Enterprises: An Empirical Evidence from Pakistan" (Experimental from Pakistan on the operation and structure of small and medium enterprises). The purpose of the study is to find out the performance, employment structure, and productivity of small and medium enterprises of a populous country like Pakistan.

Chuanli Wei (2014) published the document "SME technical efficiency and scale calculation methods and selection of indicators" (Technical efficiency of small and medium enterprises and selection of indicators). The main content of the article is to estimate the scale and technical efficiency of SMEs by DEA method. Through this study, calculating the scale and technical efficiency of SMEs increases with the theoretical approach and econometric model.

Nguyen Khac Minh (2002) published the study "Comparative analysis of the effectiveness of manufacturing industries in Hanoi and Ho Chi Minh City," Vietnam Development Forum - Research project between the National Institute Graduate of Policy Studies (GRIPS), Japan and National Economics University, Vietnam. The study made the comment: Manufacturing industries in Vietnam, especially in Hanoi and Ho Chi Minh City, are of prime importance to the national economy. After the crisis caused by the collapse of the former Soviet Union, these industries recovered and grew at an average rate of 10% per year, and they contributed significantly to the growth of the total product. Domestic (GDP). These industries are also on the list of top export industries. In addition, they also contribute to reducing unemployment, taking advantage of the competitive advantage of labor-intensive industries. Although the activities of enterprises in these sectors have improved much, in general, efficiency is still low. Based on the results of the SFPF and DEA approaches (using the input optimization model) with 32 sectors in the two cities, if these sectors are considered to have the same production line, then the current level of activity These industries can reduce the current input level by 30% to 40% to produce the current output level. Many manufacturing industries in Hanoi and Ho Chi Minh City have low technical efficiency, and this may be due to a number of fast-growing industries due to their high opportunity costs and a lucrative labor market. Move. Some other causes may lead to inefficiencies in these industries, such as workers not being able to adapt to new technologies or the strategic difference of an industry company making the industry competitive advantage. Big change. These causes may suggest appropriate policies for planners.

Quan Minh Nhut (2007) with the document "Profitability and efficiency analysis according to the production scale of a three-crop monoculture model and rotation of two-color rice crops in New Market - An Giang in 2005" used tissue DEA model to focus on evaluating the economic efficiency and efficiency by production scale for the two selected farming models in Cho Moi district in An Giang province. The profit and efficiency analysis by scale is done using the corresponding Cost-Benefit Analysis (CBA) and data-based membrane analysis (DEA) methods based on data. Data were collected independently from two groups of farmers: 1, applying the monoculture model of three rice crops and 2, applying the rotation model of the one-crop soybean crop. The analytical results show that the economic efficiency and scale efficiency of the households in the two-rice-crop crop rotation model are higher than that of the three-rice-monoculture households.

3. Data and results

Data

The data includes 22,341 data (from 2010, 2011, 2012, 2013, 2014, 2015) small and medium-sized exporters in the agricultural sector, from GSO, Vietnam. In particular, the types of businesses are also quite well listed: state-owned enterprises, joint-stock enterprises with the state capital, collective enterprises, private enterprises, partnerships, and liability enterprises. The term, joint stock enterprises without state capital, enterprises with 100% foreign capital and joint ventures with foreign countries. Each enterprise in the data set has the following criteria: Provincial code, Business ID, Tax code, Year of data, Type of business, Main business and production sector, Business year, Profit before tax, Tax VAT, Export Tax, Import Tax, Labor, Capital, Revenue ... In addition, the data set divides the enterprises of each industry by code, and the agricultural sector has codes 15 and 16.

For the purpose of analyzing scale efficiency, the output of the model has a variable, which is revenue (R); The input consists of two variables, namely labor (L), capital (K). The input and output variables are described as follows. The output is revenue (R) including sales of goods and services and revenue from financial activities of enterprises and is calculated in million dong. Labor (L) is measured by the number of people, and it represents the total number of employees of the business in a year. The net amount of capital (K) is calculated in a million dong. The author chooses enterprises with industry codes 15 and 16 (agricultural sector) and has an export tax of more than 0. For businesses entitled to tax exemption and reduction, and noted that export enterprises can enjoy tax exemption or reduction. Filtered into research data in this study. At the same time, select enterprises with labor (L) greater than 10 and less than 300 (satisfying small and medium enterprises conditions).

DEA model

The data analysis uses knowledge of linear model, and the goal is based on available data to build a non-parametric space. Meanwhile, the performance of organizations and businesses will be calculated based on this space. Based on the characteristics of the production system, DEA is divided into two types of models: minimizing input with the assumption of unchanged output and maximizing output with the assumption of constant input. The DEA model minimizes input with unchanged output assumptions, including the basic steps outlined below.

Assumption:
- Y is a matrix (MxN) of outputs with yij being the ith output of the jth enterprise.
- X is a matrix (PxN) of inputs with xkj being the kth input of the jth enterprise.

Therefore, the firm's scale efficiency formula is written by the formula:

$$\lambda_n^j = \min \lambda, z^\lambda \lambda_n^j = \min_{\lambda,z} \lambda$$

with:

$$y_m^j \le \sum_{i=1}^{N} z_i y_m^i \quad \text{when } j = 1,2,\dots,N. \text{ và } m = 1,2,\dots.,M$$

$$\sum_{j=1}^{N} z_j x_k^j \le \lambda x_k^j \quad \text{when } j = 1,2,\dots,N. \text{ và } k = 1,2,\dots,P$$

$$z_j \ge 0 \quad \text{with all j.}$$

When λ is a scalar value of 0 <λ <1, then giảm reduces the proportion of all inputs in the enterprise. When λ is a scalar value representing a reduction rate of inputs for 0 <λ <1, and is the minimum value of λ therefore. xj represents input vectors for ith businesses. The maximum scale effect is achieved when consolidating. DEA builds a unique standard for every business. And the benchmark of firm j is built from vector z. The ith factor of the vector shows the contribution of the ith enterprise to the best performance of the enterprise i. The NRS input measures of scale efficiency for an enterprise are calculated as the following solutions:

$$\lambda_c^j = \min \lambda, z^{\lambda}\, \lambda_n^j = \min_{\lambda,z} \lambda$$

s.t.

$y_m^j \le \sum_{i=1}^{N} z_i y_m^i$ when $j = 1,2,\dots,N.$ and $m = 1,2,\dots.,M$

$\sum_{j=1}^{N} z_j x_k^j \le \lambda x_k^j$ when $j = 1,2,\dots,N.$ and $k = 1,2,\dots,P$

and $\sum_{j=1}^{N} z_j \le 1;$

$z_j \ge 0$ with all j = 1,2, …, N

VRS input measure of scale efficiency for a business is calculated:

$$\lambda_v^j = \min \lambda, z^{\lambda}\, \lambda_c^j = \min \lambda, z^{\lambda}\, \lambda_n^j = \min_{\lambda,z} \lambda$$

s.t.

$y_m^j \le \sum_{i=1}^{N} z_i y_m^i$ when $j = 1,2,\dots,N.$ and $m = 1,2,\dots.,M$

$\sum_{j=1}^{N} z_j x_k^j \le \lambda x_k^j$ when $j = 1,2,\dots,N.$ and $k = 1,2,\dots,P$

and $\sum_{j=1}^{N} z_j = 1;$

$z_j \ge 0$ with all j = 1,2, …, N

Inputs of scale efficiency measures are defined by:

$$SE^j = \lambda_c^j/\lambda_v^j \quad SE^j = \lambda_c^j / \lambda_v^j$$

If Sj = 1: optimal scale efficiency

If Sj < 1 non- scale effeciency

If Sj < 1 and $\lambda_c^j = \lambda_v^j$: enlarge operating scale

Nếu Sj < 1 và $\lambda_c^j \ne \lambda_v^j$: narrow operating scale

Results

Results from DEA model are shown in the table below. Businesses operate at an optimal scale when the scale is 1. When the scale is less than 1, the enterprise operates in DRS (decreasing return to scale) or IRS (increasing return to scale).

Table 1: Scale effect of small and medium-sized agricultural export enterprises in Vietnam from 2010 – 2015

Scale efficiency 2010	**scale**	**condition**	**enterprise**	**recommendation**
Scale = 1	CRS		75	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3631	Increase
Scale < 1	DRS	$\lambda_c^j \ne \lambda_v^j$	23	Decrease
Scale efficiency 2011	**scale**	**condition**	**enterprise**	**recommendation**

Scale = 1	CRS		71	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3440	Increase
Scale < 1	DRS	$\lambda_c^j \neq \lambda_v^j$	18	Decrease
Scale efficiency 2012	**scale**	**condition**	**enterprise**	**recommendation**
Scale = 1	CRS		84	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3791	Increase
Scale < 1	DRS	$\lambda_c^j \neq \lambda_v^j$	32	Decrease
Scale efficiency 2013	**scale**	**condition**	**enterprise**	**recommendation**
Scale = 1	CRS		82	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3536	Increase
Scale < 1	DRS	$\lambda_c^j \neq \lambda_v^j$	26	Decrease
Scale efficiency 2014	**scale**	**condition**	**enterprise**	**recommendation**
Scale = 1	CRS		81	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3807	Increase
Scale < 1	DRS	$\lambda_c^j \neq \lambda_v^j$	21	Decrease
Scale efficiency 2015	**scale**	**condition**	**enterprise**	**recommendation**
Scale = 1	CRS		93	Optimal scale
Scale < 1	IRS	$\lambda_c^j = \lambda_v^j$	3991	Increase
Scale < 1	DRS	$\lambda_c^j \neq \lambda_v^j$	25	Decrease

(*Source: Results from DEA model by the author)*

In general, in the 2010-2015 period, the number of enterprises reaching the optimal scale is very small. Businesses operating at the scale need to increase the scale to increase operational efficiency accounted for over 90%. From the results table shows the relationship between Scale efficiency (SE), increasing returns to scale (IRS) and decreasing returns to scale (DRS) from 2010-2015. In these six years, 75, 71, 84 respectively, 82, 81, and 93 businesses (Scalei = 1) operate at the optimal scale. Therefore, businesses need to keep the scale of operations to get the best results. In addition to the enterprises operating on the optimal scale, the remaining businesses do not operate at the optimal scale, for six years of research, respectively 3654, 3458, 3823, 3562, 3828, 4016 businesses. Then these businesses will fall into two cases:

Case 1: That enterprise has $\lambda_c^j = \lambda_v^j$ the reason for the firm to operate at an optimal scale because the efficiency increases by scale, which means that small and medium-sized exporters can increase efficiency. Use the inputs by increasing the size of the business and thereby reducing operating costs. Observing the results from the table above, it can be seen that from 2010 to 2015, there are 3631, 3440, 3791, 3536, 3807, 3991 businesses operating at not optimal scale and these enterprises need to increase the scale of operation

Case 2: The enterprise has $\lambda_c^j \neq \lambda_v^j$, so the reason why the enterprise is not operating at the optimal scale is because the efficiency is reduced by scale, which means that these enterprises can increase the efficiency of using the first factors. Enter by reducing the size of the business. Results from the DEA method show that, from 2010 - 2015, there are 23, 18, 32, 26, 21, and 25 businesses that need to reduce the scale of operations.

Factors affecting scale efficiency

Regional factors

In this study, the region in Vietnam is divided into three regions: North, Central, and South. Characteristics of each region and number of businesses are different. Below is a table of results for scale performance in each region. For D1 (Region 1) is the North, D2 (Region 2) is Central and D3 (Region 3) is the South.

Businesses operate at an optimal scale when the scale is 1. When the scale is less than 1, the enterprise can operate at Drs or Irs.

Table 2: Scale efficiency by region

Year	Region	Obs	Crste	Vrste	Scale
2010	Region 1	608	0.03	0.17	0.39
	Region 2	651	0.04	0.41	0.2
	Region 3	2395	0.08	0.48	0.25
2011	Region 1	459	0.01	0.15	0.31
	Region 2	591	0.02	0.39	0.18
	Region 3	2408	0.04	0.45	0.2
2012	Region 1	620	0.06	0.17	0.56
	Region 2	659	0.08	0.47	0.29
	Region 3	2544	**0.16**	**0.57**	0.25
2013	Region 1	510	0.05	0.15	0.54
	Region 2	627	0.07	0.41	0.3
	Region 3	2425	0.13	0.49	0.35
2014	Region 1	550	0.03	0.15	0.41
	Region 2	586	0.05	0.38	0.23
	Region 3	2692	0.08	0.49	0.26
2015	Region 1	546	0.03	0.17	0.39
	Region 2	632	0.04	0.41	0.2
	Region 3	**2838**	0.06	0.37	0.36

(Source: Results from DEA model by the author)

With the highest efficiency level of 1 and the lowest level of 0, there are some comments given as follows:

From the table of data, the South accounts for the majority of small and medium-sized agricultural exporters. Over the years in the research period, the number of enterprises is mainly located in the Southern region. This number is over 2000 enterprises out of over 3000 businesses each year. In the other two regions, there are differences in the North and Central regions, but not many, mainly in the range of 500 to 600 enterprises. Overall efficiency reached the best in 2012 with Crs and Vrs of 0.16 and 0.57.

With scale effect, in the first 2 years of 6 years of study, this figure is low. Only in 2012, small and medium-sized agricultural exporters in the North achieved the best scale efficiency with 0.56. Enterprises in this industry still maintained good performance in 2013 but then declined gradually in the next two years. In the Central region, the scale efficiency is relatively low compared to the other two regions. This level of efficiency does not change much over the years. They maintain 0.2 to 0.3.

The South is the largest concentration of small and medium-sized agricultural exporters in Vietnam, and scale efficiency is also the best compared to the other two regions in the study. This area holds numbers ranging from 0.2 to 0.4.

Other factors affect scale efficiency

The author chooses to measure the effect of four factors, namely the ratio of capital to labor (kl); Wages on labor (wl), taxes on total revenue (tr) and inventory for revenue (ir) by Tobit model. At the same time, select the regional factor as a dummy variable to measure its impact on the scale efficiency of the selected enterprises for research. The factors affecting the scale efficiency of enterprises in the study are presented in the following tables. In some years, there are a few factors that do not have a significant impact on firm's scale performance that will not be included in the table, for example, 2010 and 2014 are not statistically significant for ir variables. kl affects the performance of businesses.

Table 3: Factors affecting the scale efficiency of small and medium agricultural export enterprises in the period of 2010 - 2012

Year	TE	Coef.	Std.Err.	T	P	[95% Conf.	Interval]
2010	Wl	0.0084317	0.0015982	7.331	0	0.0056502	0.0107032
	Tr	-0.3438077	0.1198095	-2.669	0.004	-0.5785513	-0.1095742
	d1	0.1752941	0.0285717	6.441	0	0.1195833	0.2304948
	d3	0.0363922	0.0202458	2.021	0.082	-0.0029809	0.0752554
	_cons	0.1572266	0.0177891	9.281	0	0.1226741	0.191269
	/sigma	0.289334	0.006876	0.221		0.2761959	0.301962
2011	Kl	0.0008046	0.0005823	-2.669	0.003	0.0000165	0.0010826
	Wl	0.0052408	0.0013157	5.801	0	0.0030136	0.0069579
	d1	0.1302751	0.0283125	4.881	0	0.0750734	0.1849669
	d3	0.0241142	0.0204107	1.391	0.236	-0.0155823	0.0633006
	_cons	0.138528	0.017491	8.341	0	0.1045607	0.1719852
	/sigma	0.291926	0.0069555	0.221		0.278632	0.3047099
2012	Kl	0.0008028	0.0005854	-2.499	0.008	8.7E-06	0.001087
	Wl	0.0081232	0.0014337	8.301	0	0.0056645	0.0100719
	Tr	-0.2603321	0.1463677	-1.569	0.069	-0.5471739	0.0259998
	d1	0.2557233	0.031917	8.341	0	0.1934516	0.3174849
	d3	0.0644912	0.0222295	3.151	0.003	0.021228	0.1072445
	_cons	0.2292615	0.0201919	11.841	0	0.1899962	0.2680167
	/sigma	0.3242959	0.0074781	0.221		0.3099772	0.3381047

(Source: Results from DEA model by the author)

In these 3 years, the tax/revenue factor has a negative impact on the efficiency of enterprises, in particular, in 2010 and 2012, these factors are correlated with negative values. In addition, the labor/wage ratio has a positive impact on the performance of businesses, with a level of significance of about 0%. That means the labor/wage ratio has contributed to improving the performance of businesses.

Among regional factors, only sector 1 affects the performance of businesses, with a significant level of 0%.

The results show that the impact of tax/revenue ratio has a negative impact on business performance in 2010. This means that these factors hinder the efficiency of enterprises. In addition, d3 has a positive impact on the performance of enterprises, with the significance level of 0.082 in 2010 and 0.236 in 2011. In this year, the capital/labor ratio also has a positive influence on business activities. This suggests that companies that use their capital for labor are effective.

Similarly, in 2012, the tax/revenue factor is the only factor that has a negative impact. The remaining factors have a positive effect on the performance of businesses with high reliability.

This is followed by a table showing the influence of factors on firm's efficiency in the following years of the study period.

Table 4: Factors affecting the scale efficiency of small and medium agricultural export enterprises in the period of 2013 - 2015.

Year	TE	Coef.	Std.Err.	T	P	[95% Conf.	Interval]
2013	Wl	0.0067305	0.0012017	9.031	0	0.004727	0.008224
	Ir	-0.0377372	0.0311516	-1.039	0.019	-0.0985103	0.022526
	d1	0.2190892	0.0313647	7.301	0	0.157898	0.2797705
	d3	0.0413562	0.0221852	2.091	0.062	-0.0018224	0.0840249
	_cons	0.2184155	0.0192116	11.871	0	0.1810718	0.2552492
	/sigma	0.3172882	0.0074858	0.221		0.3029536	0.3311128
2014	Wl	0.0054606	0.0011134	8.161	0	0.0036303	0.0067809
	Tr	-0.1028508	0.0965103	-0.859	0.28	-0.2918812	0.0856697
	d1	0.1536973	0.0281218	5.761	0	0.0988678	0.2080169
	d3	0.0020087	0.0202612	0.281	0.896	-0.0373958	0.0409032
	_cons	0.1636085	0.0174822	9.821	0	0.1296573	0.1970498
2015	Wl	0.0079605	0.0024317	9.03223	0.00123	0.005957	0.009454
	Tr	-0.0365072	0.0323816	-1.03777	0.02023	-0.0972803	0.013756
	d1	0.2403192	0.0345947	7.30323	0.00123	0.159128	0.2820005
	d3	0.0425862	0.0234152	2.09223	0.06123	-0.0005924	0.0852549
	_cons	0.2196455	0.0204416	11.87223	0.00123	0.1823118	0.2564792
	/sigma	0.3185182	0.0087158	0.22223	0.00123	0.3041836	0.3323528

(Source: Results from DEA model by the author)

From 2013 to 2015, the impact of the salary/labor ratio (wl) and d1 is similar to the previous period, both positively impacting the scale efficiency of enterprises with a significance level of 0%. . This shows that salary policy in this period is effective. The d3 factor in these years has a positive effect on scale efficiency, with a significance level of more than 0%.
More detail, in 2013, ir had a negative effect, meaning that these variables did not achieve the expected value. In addition, in 2014 and 2015, there were negative impacts on business operations. This shows that the tax policy has a negative impact on the operation of the business.

4. Conclusion

Based on the results of the model, there are some conclusions about the current status of the scale efficiency of small and medium-sized exporters in Vietnam's agricultural sector as follows:
- Most businesses operate below the optimal scale, ie, need to scale up operations to get the best scale.

- Most businesses in this sector operate in the South of Vietnam, and the number of enterprises operating at good scale is also in this area.
- The biggest negative factor affecting the scale efficiency of enterprises is the tax/turnover ratio of enterprises. The second factor affecting negatively is the ratio of inventory/revenue.
- The most positive factor is the salary/labor factor, followed by the capital/labor ratio.
- For regional, northern, and southern factors, there is a positive influence on the scale of business activities. Central Vietnam is taken as a base for comparison.

From the results of the DEA model, the researched enterprises mostly operate below the optimal scale. These businesses need to expand their operations through increasing capital, increasing labor resources to improve the efficiency of their scale. The results also show that there are very few exporters in the agricultural sector operating at the optimal scale, although operating at a small and medium scale. This clearly demonstrates that not all businesses need to operate on a large scale to have the best effect. The most important thing here is that businesses need to operate at a scale that fits their inputs to achieve the best output. Another outstanding result from the model is that there are a few businesses that need to reduce the scale of operations to get an effective scale. These businesses are using a large input source compared to their operating level. The paper addresses factors affecting scale efficiency, such as regional, domain, tax, inventory, wages, and capital. The results show that firms with scale efficiency are mostly located in the Southern region, the tax and inventory factors negatively affect the scale efficiency of enterprises, so they need to be reviewed, wage factors and The assessed capital has a positive impact on the scale efficiency of the enterprises in the study.

References

Charnes, A., Cooper, W. W., and Rhodes, E. (1978). *"Measuring the Efficiency of Decision- marking Units*," European Journal of Operational Research 2: 429.
Chuanli Wei, 2014, "*SME technical efficiency and scale revenue calculation methods and selection of indicators*," COMPUTER MODELLING & NEW TECHNOLOGIES, 18(12C), 1113-1116.
Gin Chong, 2008, "*Measuring performance of small-and-medium-sized enterprises: the grounded theory approach*," Journal of Business and Public Affairs, Volume 2, Issue 1.
Kristin Hallberg, 2000, "A market–Oriented Strategy for Small and Medium Scale Enterprises," International finance corporation, Washington, D.C.
Nguyễn Khắc Minh, 2002, "Phân tích so sánh về hiệu quả của các ngành sản xuất ở Hà Nội và Thành phố Hồ Chí Minh", diễn đàn Phát triển Việt Nam - Dự án liên kết nghiên cứu giữa Viện Quốc gia Sau đại học về Nghiên cứu Chính sách (GRIPS), Nhật Bản và trường ĐH Kinh tế Quốc dân, Việt Nam.
Nordin Haji Mohamad1, 2012, "*Decomposing total factor productivity growth in small and medium enterprises, SMEs*" Indian Journal of Science and Technology, Vol. 5, No. 5, 2706-2712.
Quan Minh Nhựt, 2007, "Phân tích lợi nhuận và hiệu quả theo quy mô sản xuất của mô hình độc canh ba vụ lúa và luân canh hai lúa một màu tại Chợ Mới – An Giang năm 2015", Tạp chí Khoa học 2007: 7 167-175, Trường Đại học Cần Thơ.
S. Azra Batool, 2011, "The Performance and Structure of Small & Medium Enterprises: An Empirical Evidence from Pakistan", Pakistan Journal of Social Sciences, Vol. 31, No. 2, pp. 433-447.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 469-488
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.102

The Effect of Operations Strategy on Performance of Consultancy Firms? An Empirical Survey of Management Consultancy Firms in Nairobi, Kenya

Eunice N. Wandiga[1], James M. Kilika[1], Rosemary James[2]

[1] Department of Business Administration, School of Business, Kenyatta University, Nairobi, Kenya
[2] Department of Management Science, School of Business, Kenyatta University, Nairobi, Kenya

Correspondence: Eunice N. Wandiga. Email address: nginah2001@gmail.com

Abstract
The purpose of this study was to establish the effect of operations strategy on the performance of management consultancy firms in Nairobi, Kenya. The objectives of the study were: to investigate the effect of resource management, value proposition, facility, and knowledge-based value chain strategies on performance of management consultancy firms in Nairobi, Kenya. The study was conducted among management consultancy firms in Nairobi. The target population for the study was all the 227 management consultancy firms which practice as marketing, human resource, accounting and finance, and operations management consultants in Nairobi out of which 144 were selected using stratified random sampling technique. The study found that resource management, value proposition, and knowledge-based value chain strategies have a significant positive effect on the performance of management consultancy firms while facility strategy has no significant effect on performance on management consultancy firms. The findings raise theoretical implications underpinning strategic management practice and theories. It also raises practical implications to management consultants who are in charge of developing and deploying the operations strategy. The study recommends further research be extended to other consultancy businesses, manufacturing, banking, and insurance sector.

Keywords: Facility Strategy, Management Consultancy Firms, Operations Strategy, Value Proposition Strategy

1. Introduction

Consulting firms are those business organizations that provide professional advice to an individual or an organization, often for a fee. They provide access to industry-specific specialists and subject-matter experts. Consultancy firms, according to Kipping and Clark (2012), are categorized depending on the sectors that they serve. They are part of the Knowledge-Based Intensive Sector and are deeply involved in knowledge exchange, and their core activity is to transfer information, design, experience or professional knowledge to client firms and assist in applying it (Bouncken & Kraus, 2013). They mainly fall under the following fields: financial and accounting, information technology, management, human resources, legal services, hotel, and hospitality industry.

Miles (2005) notes that the work of these firms entails collecting, generating, analysing, and distributing knowledge with the aim of providing competences and solutions that the clients cannot develop for themselves.

According to Walsman, Brandon-Jones, Lewis, and Verma (2015), management consulting business has grown rapidly over the past few years because of the expansion in economic activity globally that can be associated with the rise of management as a unique field of study. Even though management consulting has been in practice for long, little scholarly attention has been given to this context (Srinivasan, 2014). According to Fincham, Mohe and Seidl (2013) the reasons why this industry is under-researched is because it is highly fragmented with very many different management consultancy firms offering variety of services; it is non-regulated as opposed to other industries and firms in this industry adopt different strategies to differentiate themselves from others and to position themselves in the market. The pressure to respond to changes in customer demands, workforce preferences, and competition has led to these firms offering a variety of services in management (Mukkamala & Razmerita, 2014).

Modern business organizations are forced to employ strategies that will give them an upper hand above their competitors due to the level of competition in the business environment (Barney, 2011). This competition has led to businesses becoming aggressive and more dynamic in identifying and implementing strategies that guarantee survival through superior performance. Strategic management, therefore, becomes a key ingredient for all business organizations that want to survive in such a competitive business environment (Melby, 2015). According to Cameron, Bateman, and Snell (2014), strategic management involves specifying organizational objectives and defining the main direction of the business by formulating plans and necessary policies required for the accomplishment of these objectives as well as allocating required resources.

Managers adopt strategies at three levels: corporate level, business level, and functional level so as to achieve competitive advantage and superior performance for their organization (Johnson, Scholes & Whittington, 2008). Operations strategy is part of the firm's functional strategy that addresses key questions about how key organizational resources are acquired and configured so as to attain the set objectives (Slack, 2015). Operations strategy emanates from the operations function of an organization which is widely considered to be a critical function in the achievement of organization objectives (Duarte, Brito, Di Serio, & Martins, 2011). Organizations that design an operations system that is able to create, deliver and sustain value to the market are assured of continued revenue generation that leads to superior performance and organization survival (Wandiga, Kilika & James, 2017). Thus the development of an effective operations strategy ensures continuous value creation process and enables goal achievement in the organization.

A firm's operations strategy incorporates actions and strategic decisions which are essential in shaping the long-term capabilities of the operations and their role towards overall strategy through the reconciliation of market needs with operation resources (Slack, 2015). The way in which an organization secures, deploys, and utilizes its resources determines the extent to which it can successfully pursue specific performance objectives. According to Purce (2014), there are five operations performance objectives that are of strategic interest to management: cost, quality, speed, dependability, and flexibility. Hence operations strategy involves collective and concrete actions chosen by the firm and executed within the operations function to enable the firm to achieve the desired corporate performance objectives in response to the competitive priorities chosen by the firm (Melby, 2015).This plan enables the operation function to utilize firm resources best and therefore achieve high performance (Duarte, *et al.,* 2011).

Haider (2009) observed that an operations strategy involves the formulation of the entity's long-term plan for ensuring proper use of resources for a high level of firm's compatibility between these resources, overall corporate strategy, and performance. Operations strategy is viewed as a key contributor to firm's performance which is achieved through series of events organized in a logical flow right from acquisition and configuration of resources, developing capabilities, building competences and eventually resulting in a superior performance.

The concept of operations strategy has received a lot of attention from strategic management researchers with different authors operationalizing the construct in different ways. Oparanma (2010) divided operations strategy into two major categories; those strategies focusing on structural elements consisting of the facility, capacity as well as the choice of processes and those focusing on infrastructure such as workforce, quality, procurement, and organization structure. Luz Martín-Peña and Díaz-Garrido (2008) identified three types of generic operations strategy from literature review: Strategies for minimizing cost whose purpose is to achieve greater efficiency; Strategies for ensuring high quality products which aim at identifying consumers' needs and responding to them rapidly through provision of quality products; Strategies that implant new technology and operations processes which aim at introducing new designs and products rapidly and incorporating customers' requirements through differentiation.

Wandiga, Kilika, and James (2017) identified four types of operations strategy applicable to Knowledge Based Intensive sector organizations from a theoretical review of literature: resource management strategy, knowledge-based value chain strategy, facility strategy, and value proposition strategy. Slack (2015) argues that there are four decision areas that are needed to manage the resources of the operations and these forms the types of operations strategy in firms; Capacity strategy which deals with configuration and organization of capacity and facilities; Supply network strategy that deals with how operations are integrated with other functions of organization and the role undertaken by each function in the firm; Process technology strategy which involves determining the choice and development of processes and systems that transform resources into final products and Development and improvement strategy that deals with decisions on how the operation system is run on a continuous basis.

Arising from the above discussion this study noted that there are different types of operations strategies adopted by different organizations depending on the environment in which the organizations are operating, the competitive priorities they intend to achieve and the products offered or services provided. For purpose of this study four types of operations strategy were adopted which are applicable to knowledge-based organizations: resource management strategy, knowledge-based value chain strategy, facility strategy and value proposition strategy (Khalili, Salimian, Nazemi & Alborzi, 2013; Luz Martín-Peña and Díaz-Garrido, 2008; Oparanma, 2010; Slack, 2015, Wandiga, Kilika & James, 2017).

Consultancy firms across the world are categorized depending on the sectors that they serve and mainly fall under financial and accounting, information technology, management, human resources, legal services, hotel, and hospitality industry as well as health care (Kipping & Clark 2012). In Kenya, there has been an exponential growth in the number of consultancy firms, especially in Nairobi City County, where many organizations and business firms have their offices. This is largely attributed to the modern trend of information research being relied upon in many undertakings of different institutions as well as expansionary policies adopted by the Government (Cheruiyot, 2011). Kenyan consultancy industry is dominated by foreign consultancy firms (Mungai, 2012). Majority of local consultancy firms constantly face financial uncertainty, low turnover levels, poor reputation, inadequate skills, and financial resources and often have little experience (Aaker, 2012). For this reason, the majority end up closing down their operations in their first few years of operation due to poor performance. Srinivasan (2014) notes that even though the use of management consultant firms has increased over time, little research attention has been given to this area.

Firm performance refers to the end result of activities or the outcomes of the organization operational processes (Wheelen & Hunger, 2010). Performance is achieved in a series of events organized in a logical flow starting from acquiring and configuring of resources, developing capabilities, and building competences hence resulting in superior performance. Rasula, Vuksic, and Stemberger (2012) viewed performance as the competency of an organization to transform the resources within the firm in an efficient and effective manner to achieve organizational goals. It is further viewed as the organization's ability to acquire and utilize its scarce resources as expeditiously as possible in the pursuit of its operational goals.

Traditionally firm performance was measured based on financial measurements only such as sales growth, profitability, market share growth and ROA which has been considered to be limited since they make a cross-sectional comparison of performance difficult, and they focus only on one aspect of the firm ignoring other non-quantifiable processes that contribute to firm performance (Spanos & Lioukas, 2001). New performance measurement dimensions accommodating both the financial and non-financial measurement indicators have been introduced to include, the Performance Measurement Questionnaire (PMQ) (Dixon, Nanni & Vollmann, 1990), the Balanced Scorecard, the DuPONT model, which links accounting measures and financial ratios among others. Each of these models provides a unique and different lens through which to view an organization's performance (Richard, Devinney, Yip & Johnson, 2009).

Consultancy firms experience numerous challenges in trying to measure their performance owing to the lack of a standardised measure of their performance. Srinivasan (2014) noted that the services offered by these firms are complicated to study, measure, and quantify since different firms have different differentiation and positioning strategies and are not homogeneous in their business focus. Most of the consultancy firms focus on multiple areas of consultancy. It is also noted that these firms operate under secrets. In view of these challenges, the authors noted that there is little documented evidence on performance measures of management consultancy firms, the operations strategies developed and deployed by these firms and the link between the operations strategies deployed and performance of management consultancy firms hence the need for research on management consultancy firms based on their operations strategies.

1.1 Statement of the Problem

It has been noted that consultancy firms worldwide face numerous challenges, touching on the uncertainty of returns, poor reputation, development of sustainable strategies, gaps between consultancy assignments and inadequate financial, technical and human resource base (Jacobs, Swink & Linderman, 2015; Aaker, 2012; Ling & Gui, 2009). According to Tanui (2015), these challenges pose a threat to the competitiveness and ultimate performance of management consultancy firms. Cheruiyot (2011) found that most management consultancy firms in Kenya report poor performance because of the persistent struggle to attract and maintain new clients. Over and above these challenges, Srinivasan (2014) observed that the nature of services offered by consultancy firms are difficult to study, quantify and measure hence leading to a situation in which stakeholders have given little attention to monitoring performance trends in the sector. In addition, considering the heterogeneous nature of services provided by these firms, strategic management literature has not addressed the issue of performance dimensions of the consultancy firms. Further, the dimensions proposed by practising consultants and consultancy firms have not been tested empirically (Hill, 2018). Thus, very little information exists on the performance of management consultancy firms.

The attempts made to investigate the role of an operations strategy have faced empirical challenges. While early efforts made towards understanding operations strategy processes focuses on conceptual reasoning to articulate the operations strategy (Anderson, Cleveland & Schroeder, 1989; Boyer & Lewis, 2002; Ward, Duray, Leong, & Sum, 1995), recent studies show that there is a link existing between operations strategy and other broader aspects such as strategic leadership, institutional conditions, market orientation, organisational context, and corporate strategy. These studies have used both empirical data and conceptual reasoning in establishing the links between variables only at an aggregate level (Shehu & Mahmood, 2014; Craig & Neubaum, 2014; Dibrell, Bharadwaj, Chauhan & Raman, 2015; Nawaz, Hassan & Shaukat, 2014).

Other studies that have been conducted on firm resources management, facility management, value proposition and Knowledge-based value chain, have only looked at them as mere organizational functions and not as types of operations strategies (Ombaka, Machuki & Mahasi, 2015; Myeda & Pitt, 2014; Ekman, Raggio & Thompson, 2017). Therefore, the specific types of operations strategies in a knowledge-based intensive sector have not received adequate attention from researchers. Therefore, this study sought to investigate the effect of operations strategy on the performance of management consultancy firms in Nairobi City County, Kenya. Specifically, the study assessed the effect of resource management strategy, facility strategy, value proposition strategy, and knowledge-based value chain strategy on performance of management consultancy firms in Nairobi City County.

This study is significant in a number of ways. First, the conceptualization of the study responds to the existing gap on the understanding of the main constructs that underpin the study, namely performance and operations strategy. In considering the reviewed literature, the authors point out that there has been lack of a comprehensive effort to conceptualize the construct of performance in a way that would relate directly to what is in practice in the industry.

The current paper has adopted integrated measures that draw both from extant literature and the current practice among consultancy firms (Hill, 2018). Thus the findings of the study not only inform and enrich scholarship but also build a bridge in understanding among scholars and practitioners the performance dimensions of consultancy firms based on the integrated set of indicators of performance. In addition, the authors have expanded the scope of conceptualization of the construct of operations strategy beyond the focus previously given tending towards the operations function to one that embraces the strategy.

Secondly, the study adds to the existing stock of knowledge on operations strategy in a knowledge-based intensive sector of the economy. In undertaking this study among management consultancy firms, the authors respond to the calls for research to enhance the level of understanding on the effect of deployment of an operations strategy in a knowledge-based intensive sector, given that previous attempts have largely focused on the manufacturing sector of the economy. Lastly, the study contributes towards explaining a phenomenon involving operations strategy and the performance of firms using operational indicators that have been drawn from both theory and practice. By this, the scope of the range of indicators has been expanded beyond those that have characterised strategic management research touching on the construct of performance. The authors are of the view that adopting this perspective helps in mitigating against limitations that have been associated with previous research with regard to the scope of conceptualization of the construct of performance.

2. Literature Review

2.1 Theoretical Review

This study was anchored on the postulates of The Resource-Based View (RBV) and Social Capital Theory. The Resource-Based View (RBV) of the firm initiated in the 1980s by Wernerfelt (1984), Rumelt (1984) and Barney (1986) is one of the dominant contemporary approaches to the analysis of sustained competitive advantage and its implication on firm performance. The RBV posits that the possession of key resources together with their effective development and deployment enables organizations to achieve and sustain competitive advantage. The RBV theory posits that resources must be meet the requirements of the VRION Framework for the firms to gain competitive advantage (Bowman & Ambrosini, 2003). The authors relied on this theory to anchor the independent variable of the study, namely, operations strategy. In supporting the various dimensions of operations strategy in the area of resource management strategy, facility strategy and value proposition strategy, management consultancy firms adopt the RBV theory as a guide for effective and appropriate resource identification, selection of the resources and in addressing issues on how these resources are bundled and deployed in a way that gives competitive advantage thus resulting in superior performance (Ghapanchi, Wohlin & Aurum, 2014).

According to proponents of social capital theory, Bourdieu, 1983, 1986; Coleman, (1988), Social capital is what connects various forms of human capital. Daud and Yusoff (2010) noted that an employee connected to innovators and thought leaders has the valuable social capital to do their job and share with their corporate colleagues. According to Carrillo (2006), social capital consists of knowledge and organizational resources that enhance the potential for individual and collective action in human social systems. Conversely, Payne, Moore, Griffis and Autry (2011), observed that social capital comprises of those resources such as Knowledge resources that actors may access through social ties that may affect an individual's action directed toward another based on the social structure in which the action is embedded and the history of transactions between the actors (Monavvarian, Asgari, Akhavan & Ashena, 2013). In supporting knowledge-based value chain strategy, the theory outlines that for management consultancy firms to achieve superior performance there is a need for human interaction which facilitates sharing of knowledge and that knowledge in itself may not guarantee sustainable competitive advantage unless the knowledge is shared among the organizational employees and applied in the organization processes.

2.2 Conceptual and Empirical Review

2.2.1 Performance of Management Consultancy Firms

Management consultancy firms worldwide face numerous challenges which, according to Tanui, Kilika, and Mugambi, (2016) and Tanui (2015) pose a threat to the competitiveness and ultimate performance of management consultancy firms. The studies conducted internationally and locally identify challenges such as: uncertainty of returns, poor reputation, development of sustainable strategies, gaps between consultancy assignments and inadequate financial, technical and human resource base and persistent struggle to attract and maintain new clients (Jacobs, Swink & Linderman, 2015; Aaker, 2012; Cheruiyot, 2011;Ling & Gui, 2009).

Nikolova, Reihlen, and Schlapfner (2009) observed that management consultancy services have distinct characteristics that reflect the nature of services provided which include intangibility, heterogeneity, perishability, inseparability, variability and lack of ownership (Rao, 2011). Srinivasan (2014) therefore argues that due to the nature of services offered by management consultancy firms and their unique characteristics, there have been difficulties studying, quantifying and measuring the performance of these firms hence leading to stakeholders giving little attention to monitoring performance trends in the sector. In addition, strategic management literature has not addressed the issue of performance dimensions of the consultancy firms because of the heterogeneous nature of services provided by these firms (Hill, 2018).

Strategic management literature points that firm performance can be measured from two perspectives: measures relating to results such as competitiveness and financial performance and measures relating to determinants of the results which include the utilization of resources, quality, innovation and flexibility (Kloot & Martin, 2000). However, these measures, according to Spanos and Lioukas, (2001), focus on past events rather than focusing on the future of the firm, and they largely ignore non-quantifiable aspects in the business. Over time, scholars in strategic management adopted the balanced scorecard, which combines financial and non-financial measures (Kaplan & Norton, 2001). Keegan, Eiler, and Jones (1989) criticized this approach because of ignoring the competitor's perspective. The measures advanced by strategic management literature mainly focus on firms operating in the manufacturing sector and the main services sector like financial institutions, insurance companies, and hospitals hence ignoring the consultancy industry that supports the other sectors. Thus the authors noted that literature in strategic management has failed to address the issue of performance dimensions in consultancy firms based on the unique nature of services provided hence the need to identify a distinct approach for measuring the performance of these firms.

In view of the identified gaps in measuring the performance of consultancy firms, practising consultants, and consultancy firms have proposed several performance dimensions even though these measures have not been tested empirically (Hill, 2018). These performance measures include: acquisition percentage measured by the number of proposals sent during a given period and number of new clients generated from the sent proposals for that period; repeat business percentage measured by the number of compliments and repeat customers during a given period and leads generated measured by number of customers generated through referrals, enquiries, social media, networking and business events during a particular accounting period. The authors considered these proposed measures as suitable indicators for the operationalization of the construct of performance in studying management consultancy firms in an emerging economy context.

Considering the unique characteristics identified in the context of management consultancy firms, it is observable that each raises challenges that have implications on the operations system of the firms and the emergent operations strategy. Thus, management consultancy firms need to formulate and implement sound operation strategies to tackle these challenges and therefore boost their performance. The studies conducted in the area of operations strategy reveal that there are different types of operations strategies that can be adopted by firms such as: facility strategy; capacity strategy; Strategies for minimizing cost; Strategies for ensuring high quality products; Process technology strategy; Supply network strategy; Resource management strategy; Knowledge-based value chain strategy, Value proposition strategy and Development and improvement strategy (Khalili, Salimian, Nazemi & Alborzi, 2013; Luz Martín-Peña and Díaz-Garrido, 2008; Oparanma, 2010; Slack, 2015, Wandiga, Kilika & James, 2017). This study adopted four types of strategies which are applicable to management consultancy firms; resource management strategy, facility strategy, knowledge-based value chain strategy, and value proposition strategy. In the ensuing sections, each of the strategies is given a brief conceptual and empirical attention.

2.2.2 Resource Management Strategy

The operations strategy acts as part of the firm's functional strategy in addressing the big questions of how the key organizational resources must be acquired and organized to achieve the set objectives (Slack, 2015). According to

Gottschalg and Zollo, (2007), the firm's performance and competitive advantage can be achieved with a well-formulated and executed resource management strategy. In assessing the integration between organizational resources and the attained competitive advantage, Barney (1991) identified four requirements that firm resources must meet in their attempt to generating competitive advantage: value, rareness, inimitability, and non-substitutability. Rose, Abdullah and Ismad (2010) in their theoretical review on the inter-relation existing amongst the firms' competitive advantage, organizational resources, and performance agreed with Barney (1991) that for organizations to achieve a competitive advantage level that not only can at least match those of their business rivals' but also was able to exceed the industrial performance averages, business organizations should seek to understand the relationship between their internal resources, competitive advantage and performance.

Kithusi (2015) who evaluated firm's resources, entrepreneurial strategy and organizational performance of micro, small and medium furniture sector entities in Kenya found that organizational resources and entrepreneurial strategy had a significant impact on the overall performance of the firm. Ombaka, Machuki, and Mahasi (2015) conducted a study on organizational resources, external environment, innovation and firm performance on insurance companies in Kenya and found that firm's resources have a significant impact on the performance. The literature reviewed brings out the importance of resource management strategy in assisting firms in achieving competitive advantage which however depends on the type of resources acquired by firms and how they are configured/bundled (Gottschalg & Zollo, 2007). Management consultancy firm's key resource is knowledge, and their ability to embed the knowledge into their services will determine their ability to offer quality services which will enable the firms to retain their clients and attract new ones hence improving their performance, thus acquisition and configuration of resources were adopted as the measures of resource management strategy.

2.2.3 Facility Strategy

Facility strategy ascertains the various categories, layout, and location of spaces needed to fully support the initiatives of the business in attaining the organization objectives. The facility strategy must be aligned with the corporate strategy (Maas & Pleunis, 2006). Haynes, Nunnington, and Eccles (2017) noted that, in consultancy firms, investment in critical facilities has a significant influence on their operations and resilience. Moreover, it may also have a great impact on external stakeholders while at the same time protecting customers identity and confidentiality where required. It is also noted that management consultancy firms set up offices where they carry out administrative tasks, planning for clients work, and in some cases, clients work is carried out in the consultancy firm's offices. For this reason, consultancy firms require facilities for smooth operation and administrative purposes.

Chotipanich and Lertariyanun (2011) conducted a study on facility management strategy among commercial banks in Thailand and identified four types of facility management strategies: facility cost strategy; facility performance strategy; business value strategy and workplace strategy. Myeda and Pitt (2014) studied facilities management in Malaysia emphasizing on the role of facility management (FM) in facilitating organisational performance and in providing a competitive advantage. The paper proposed seven elements/factors in understanding FM development in Malaysia: Level of growth, practice, service, profession, opportunities, demands, and challenges. The study also found that firms with well-formulated FM strategies and objectives will successfully attain optimum efficiency in the survival strategy and increasing prosperity of its future. Fraser (2014) conducted a study aimed at identifying facility maintenance management strategies and systems through a detailed literature review and identified four major strategies: total productive maintenance (TPM), condition-based maintenance (CBM), reliability-centred maintenance (RCM) and condition monitoring (CM). The reviewed literature highlights the importance of developing facilities strategy, which should be aligned with business strategy so as to achieve corporate goals. However, much of the studies have been conducted in banking, health, and manufacturing sector, which need an elaborate facility strategy giving less attention to the service sector. Therefore, for the purpose of this study, the elements of facility location, layout, and process were identified as measures of facility strategy.

2.2.4 Knowledge-Based Value Chain Strategy

Knowledge-based value chain strategy involves the process of creating new knowledge in the organization, disseminating that knowledge throughout the firm and its application in the day-to-day activities of the firm (Al-Adaileh & Al-Atawi 2011). Holsapple and Oh (2013) defined knowledge value chain as a construct that comprises nine essential activities that a knowledge-driven firm is able to perform in ways that yield competitive advantage and better performance. These critical activities come from knowledge management activities, and they include primary activities of Knowledge acquisition, selection, generation, assimilation, and emission plus the secondary activities of measurement, control, coordination and leadership (Holsapple & Joshi, 2002). Gold and Arvind (2001) empirically examined knowledge management (KM) from the perspective of organisational capabilities and found that knowledge infrastructure consisting of structure, technology and culture as well as knowledge process architecture of acquisition, application, and protection are significant organizational capabilities for effective knowledge management and firm performance.

Al-Qarioti (2015), in his study on the impact of knowledge management on organizational performance at Kuwait University, aimed at seeing how faculty members evaluate KM influence on organizational performance. The study found that the three knowledge components, which include acquisition, information technology, and organization of knowledge, have a major role in improving organizational performance. The purpose of a study carried out by Mills and Smith, (2011) was to evaluate the impact of specific knowledge management resources on organizational performance where the study found that knowledge resources such as organizational structure and knowledge application were positively related to firm performance.

Zeglat and Zigan, (2013) studying the relationship between intellectual capital and business performance in the Jordanian hotel industry revealed that intellectual capital has a strong positive impact on the organizational performance of the hotels and Abdela (2016) who evaluated the impact of knowledge management on organizational performance found that knowledge application strongly influences knowledge process capability. From the reviewed literature, it is clear that the process of creating and utilizing knowledge provides an avenue for the firms to understand the key inputs that arise from the Knowledge management activities and therefore this study identified knowledge acquisition, dissemination, and application to be the indicators knowledge-based value chain strategy.

2.2.5 Value Proposition Strategy

Value proposition strategy involves developing a clear, simple statement of the benefits, both tangible and intangible that the company will provide, along with the approximate price it will charge each customer segment for those benefits. Anderson *et al.* (2006) suggested that organizations adopt one of the three approaches to developing value propositions: all benefits - by identifying a list of all benefits a company can deliver to customers; favourable points of difference – identifying benefits relative to those delivered by key competitors; resonating focus – key benefits truly valued by chosen customers that are delivered or potentially could be delivered. Value proposition (VP) of a firm is viewed as the most important aspect of strategy because it helps in determining why customers buy the products of the company. Osterwalder and Pigneur (2010) suggested that there is much need of studying value proposition throughout its entire life cycle because elements of value proposition can be generated in the five stages of the value life cycle which include: value creation stage, value appropriation stage, value consumption stage, value renewal stage and value transfer stage.

Flaherty and Rappaport (2015) studied agents of change, sustainability and industry trade associations as an evolving value proposition and found that business organizations make use of value proposition concept to target not only clients but also their vendors, employees, and partners. Ekman, Raggio, and Thompson (2017) studied value proposition alignment and noted that value proposition could boost awareness of the business's brands, create a larger client base, positive perception on products and services as well as unlocking access to new technologies for the business. Payne and Frow (2014) who conducted a study on developing superior value propositions as a strategic marketing imperative in financial services and telecommunications sector using case study approach found that value proposition is capable of influencing new and existing workers and motivating them to support the set organizational goals. The reviewed literature indicates that a strong value proposition is vital for any organization to engage with key stakeholders. However, it is noted that these studies were conducted in the area of marketing and failed to examine the relationship between value proposition strategy and performance, hence the study identified the measures of value proposition strategy to be Benefits Delivered to Customers, Favourable points of difference and Resonating focus for the purpose of this study.

The authors in summary of the extant empirical literature have four main issues. First, literature has given more attention to the broader aspects of operations strategy while explaining the relationships existing between constructs such as external environment, business strategy, competitiveness, customer engagement, organization structure, performance and leadership, and the studies have been conducted in specific contexts especially manufacturing firms. Secondly, the literature review reveals there is limited attention given on all the elements of operations strategy. Thirdly, much of the studies have been conducted in banking, health, and manufacturing sector, leaving out the service sector, which supports the manufacturing sector. Fourth, Even though studies have been conducted on organization resources, facility management, value proposition, and Knowledge-based value chain, researchers have looked at them as mere functions in organizations and not as types of operations strategies, hence there is need to consolidate them and determine their effects on firm performance. In view of this, there is need to conceptualize operations in the form of a strategy that paves the way for the integration of the theoretical reasoning advanced by RBV that proposes the aspect of configuration in the deployment of strategic resources so as to inject and build capability into each resource to sustain superior performance. Since strategies are firm investments, they can be construed as forms of strategic assets that can be configured for deployment to drive superior sustainable performance.

2.3 Conceptualization and Hypotheses

Based on the conceptual, theoretical and empirical review conducted in this study, the study proposes a simple conceptual framework that predicts the effect of operations strategy on performance of management consultancy firms in Nairobi City County, Kenya in figure 1

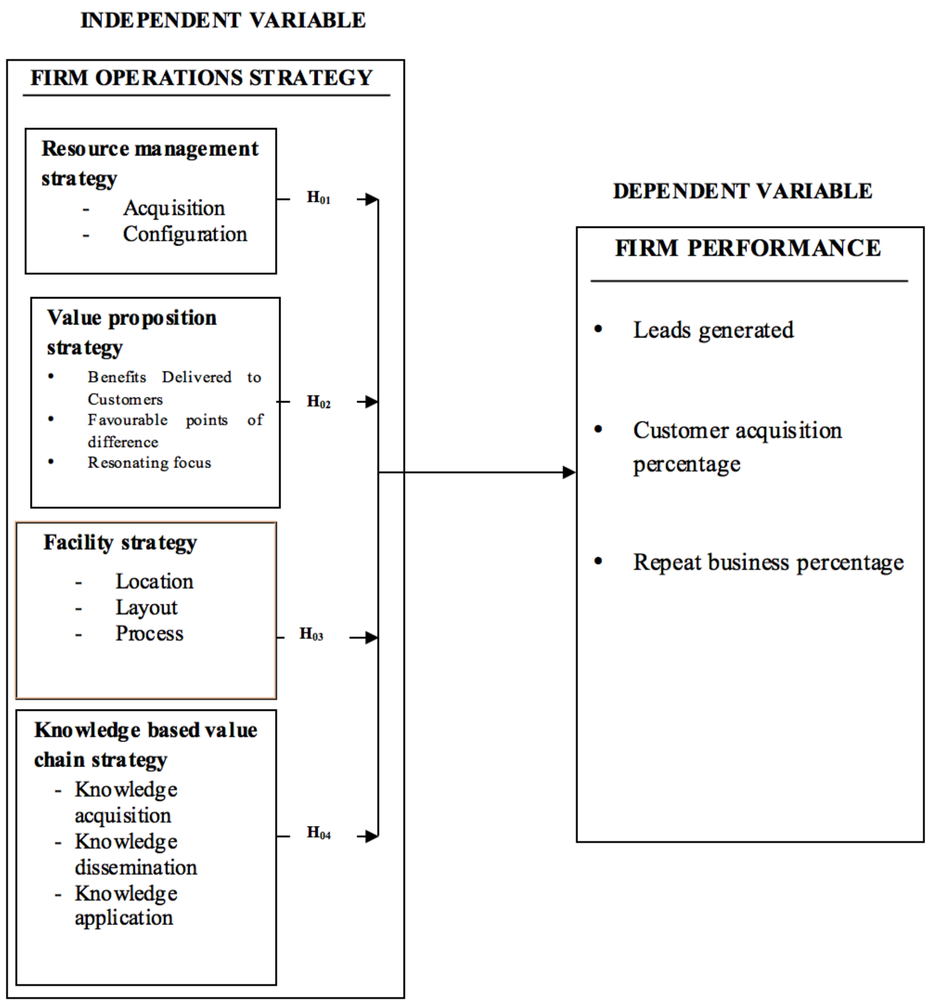


Figure 1: Conceptual Framework

The study proposes that the adoption of an operations strategy will lead to firm performance. The operations strategy has been operationalized using four constructs: resource management strategy, value proposition strategy, facility strategy, and knowledge-based value chain strategy while the performance construct has been operationalized through the indicators of leads generated, customer acquisition percentage and repeat business percentage. We argue that when each of the strategies is implemented with a focus on the configuration to generate the needed capacity to sustain superior performance, the resultant outcome will be superior firm performance. Thus we propose that the deployment of firm operations strategy will lead to the attainment of firm performance. Specifically, the study proposes that:

Hypothesis one: *Resource management strategy has a significant effect on the performance of management consultancy firms in Kenya.*
Hypothesis two: *Value proposition strategy has a significant effect on the performance of management consultancy firms in Kenya.*
Hypothesis three: *Facility strategy has a significant effect on the performance of management consultancy firms in Kenya.*
Hypothesis four: *Knowledge-based value chain strategy has a significant effect on the performance of management consultancy firms in Kenya.*

3. Research Methodology

3.1 Research Design

The study was anchored on the positivism philosophical foundation, which is based on real facts, objectivity, neutrality, measurement, and validity of results as recommended by (Saunders, 2011). Positivism maintains that knowledge should be based on facts and no abstractions, thus knowledge is predicated on observations and experiments. In line with this philosophy, the study employed descriptive and causal or explanatory research design. According Bryman and Bell (2007), descriptive research is applied in describing characteristics of the population of interest or phenomenon being investigated. This design was found appropriate as it helped the researcher to achieve the research objectives by describing the data and characteristics about the population of the phenomenon being studied; operations strategy and firm performance. Causal or explanatory research design was used to identify the extent and nature of cause-and-effect relationship existing among resource management strategy, value proposition strategy, facility strategy, knowledge-based value chain strategy and firm performance (Sekaran & Bougie 2010).

3.2 Study context and population

In Kenya, management consultancy firms are incorporated by the Registrar of Companies as Limited Liability Companies and have become leaders in the provision of tailor-made solutions to the challenges facing customers in specific market niches. Most of the firms are situated in Nairobi. This is largely attributed to the modern trend of information research being relied upon in many undertakings of different institutions as well as expansionary policies adopted by the Government (Cheruiyot, 2011) According to Tanui, Kilika and Mugambi, (2016) these firms mainly operate in the following areas: Strategy, Management, Operations, Financial and accounting, Human resource, Marketing and IT Consulting. This sector is estimated to contribute approximately 20% of the country's Gross Domestic Product. Kenyan consultancy industry is dominated by foreign consultancy firms (Mungai, 2012).

The target population for this study consisted of all the 227 management consultancy firms that consult in marketing, human resource, finance, and accounting and operations management in Nairobi. These management consultancy firms were selected because they form the largest bulk of all management consultancy firms, and their profession of practice is in the business field, which is the authors' area of specialization. According to Mugenda (2009), a sample of between 10 and 30 percent is an acceptable representation of the population while a sample of over 50% is desirable. Based on this argument, this study adopted stratified and simple random sampling techniques to select a sample of 144 respondents from the management consultancy firms in Nairobi representing 63% of all the management consultancy firms in Nairobi.

3.3 Research Data and Analysis
The study utilized questionnaires to collect primary data from the respondents. The questionnaire had two sections. The first section collected information on the respondents' demographics, while the second section collected data relating to the study variables. Pilot testing was carried out to establish the validity and reliability of the research instrument and to enhance face validity (Joppe, 2000). Cronbach's alpha (α) was used to measure the reliability of the research instrument, and according to Field, (2009), a Cronbach alpha of 0.6 or above is usually considered to be adequate. In this study, a constructed composite of 0.7 or above for all the constructs was considered satisfactory. Quantitative data was analysed using Statistical Package for Social Sciences (SPSS Version 23.0) while qualitative data was analysed using conceptual content analysis.

Descriptive statistics of the mean, frequencies, standard deviation, and percentages were calculated and interpreted for all the quantitative variables. The information was then presented inform of tables. Coefficient of determination (R^2) was used to test the significance of the model and used in measuring the extent to which variation in firm performance is explained by variations in operations strategy. F-statistic was also computed at 95% confidence level to test the overall significance of the model. Hypothesis testing was done using p-values to aid decision making regarding the null hypothesis. To enable the test of hypotheses a composite index for each variable in each management consultancy firm was computed to transform the quantitative data obtained through the questionnaire. The composite index was computed using the weighted harmonic mean as recommended by (Kilika, 2012; Kilika, K'Obonyo, Ogutu & Munyoki, 2012).

Diagnostic tests were conducted to confirm that data met the assumptions of regression analysis. Table 1 shows the results of the diagnostic tests.

Table 1: Diagnostic Tests Results

Diagnostic test	Test	Observation	Conclusion
Normality	Shapiro-Wilk tests	P>0.05	Normally distributed
Multicollinearity	Variance Inflation Factor	VIF<10	No Multicollinearity
Heteroskedasticity	Breush-Pagan test	P>0.05	No heteroskedasticity

4. Research Findings

4.1 Response Rate
The study sought to collect data from 144 respondents from 144 management consultancy firms selected in Nairobi City County. The questionnaires returned are as shown in Table 2.

Table 2: Response Rate

Strata	**Target sample**	**Actual Response**	**Response Rate**
Operations management	53	30	56.6%
Marketing Consultants	50	44	88.0%
Human resource	11	9	81.8%
Accounting and finance	30	25	83.3%
Total	**144**	**108**	**75.0%**

Out of the 144 questionnaires distributed, 108 were filled and returned, forming a response rate of 75%. In the individual categories, it was observed that there was 56.6% response rate among operations management consultancy firms, 88.0% for marketing consultancy firms, 81.8% for human resource consultancy firms and finally 83.3% for accounting and finance consultancy firms. The response rate was found to be adequate for analysis in line with observations made by Mugenda (2009) who concluded that a response rate of 50% is adequate for analysis and reporting, a rate of 60% is good while a response rate of 70% and above is excellent for analysis purposes.

4.2 Respondents Characteristics

The characteristics of the respondents were measured in terms of gender, years worked for the firm, the profession of practice, and position held in the organization. The results are summarised in Table 3.

Table 3: Demographic Information of the Respondent

Gender	Frequency	Percent
Male	57	52.8%
Female	51	47.2%
Total	**108**	**100.0%**
Profession of Organizational Practice		
	Frequency	Percent
Operations management consultants	9	8.3%
Marketing consultants	44	40.7%
Human resource consultants	30	27.8%
Accounting and finance consultants	25	23.1%
Total	**108**	**100.0%**
Position held in the organization		
	Frequency	Percent
Chief executive officer	9	8.3%
Partner	47	43.5%
Director	27	25.0%
General manager	24	22.2%
Administration	1	0.9%
Total	**108**	**100.0**
Number of Years Worked in the Management Consultancy Firm		
	Frequency	Percent
Less than 1 year	9	8.3%
1-5 years	66	61.1%
6-10 years	19	17.6%
Over 10 years	14	13.0%
Total	**108**	**100.0%**

The results show that majority of the respondents were male as shown by 52.8% (57) of the respondents, while 47.2% (51) were female. It is also observed that majority of the respondents as shown by 40.7%, were in marketing consultants, 27.8% were in human resource consultants, 23.1% were in accounting and finance consultants while only 8.3% were practicing in operations management consultants. In addition, results show that most of the respondents as indicated by 44% were partners, 25% were directors 22% were general managers, 8% were Chief Executive Officers (CEO) while only 1% were administrators. Finally, the results show that most of the respondents as shown by 61.1% (66) had worked in the management consultancy firm for between 1-5 years, 17.6% (19) for between 6-10 years, 13.0% (14) had worked for over 10 years while only 8.3% (9) had worked for less than 1 year.

4.3 Descriptive Characteristics

Descriptive statistics provide a summary of the characteristics of the study variables using measures of central tendency and dispersion, specifically the mean and the standard deviation. The findings are presented in table 4.

Table 4: Descriptive Statistics

Variable	Reliability Statistics (α)	Aggregate Mean	Aggregate Std. Deviation
Resource Management Strategy	.889	3.02	1.22
Value Proposition Strategy	.887	3.11	1.19
Facility Strategy	.892	3.10	1.20
Knowledge Value Chain Strategy	.903	2.64	1.11
Firm performance	.954	3.39	1.10

The results showed that resource management strategy had a Cronbach's Alpha coefficient of 0.889, value proposition strategy 0.887, facility strategy 0.892, knowledge-based value chain strategy had a coefficient of 0.903 while the performance of management consultancy firms had a coefficient of 0.954. All the variables had a Cronbach's Alpha coefficient greater than 0.7. Therefore, based on the recommendations of Field (2009), the research instrument was found to be reliable.

On aggregate, the resource management strategy had a mean score of 3.02 and a standard deviation of 1.22. This indicated that resource management strategy was emphasized and practiced at a moderate level by management consultancy firms in Nairobi City County and therefore had a moderate effect on performance. The overall mean score for value proposition strategy was observed to be 3.11 with a standard deviation of 1.192. These results show that most of management consulting firms undertook to apply value proposition as a strategy at a moderate extent thus the variable had a moderate effect on the performance of management consultancy firms in Nairobi City County. In addition, the mean score for facility strategy was found to be 3.1 and a standard deviation of 1.2 which showed that facility strategy practices had been deployed and practiced by the management consultancy firms to a moderate extent. Finally, the mean score for knowledge value chain strategy was 2.64, and a standard deviation of 1.11. This meant that knowledge value chain strategy activities are deployed and practiced by management consultancy firms to a low extent. The aggregate results for firm performance showed a mean score of 3.39 and a standard deviation of 1.10. It is observed from the aggregate results that average level of generated customers stood at the range of 10-15 annually.

4.4 Test of Hypotheses

Hypothesis testing was done through multiple regression analysis. The results of the tests were interpreted through the adjusted R^2 values and P values at the 0.05 significance level. The variables under study were regressed on performance indicators and a composite measure for all the variables computed to reflect overall variables. The results of the regression are as shown in the tables below

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809[a]	.6545	.641	.2687

Table 6: ANOVA[a] for Operations Strategy and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	112.7765	4	28.19	218.527	.001[b]
	Residual	17.985	139	.129		
	Total	130.7615	143			

Table 7: Table of Regression Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	2.462	1.115		2.208	.030
Resource management strategy	.592	.196	.593	4.822	.001

Value proposition strategy	.367	.210	.405	3.505	.000
Facility strategy	.021	.207	.109	0.101	.164
Knowledge-based value chain strategy	.431	.219	.442	3.028	.017

From the results, the regression model is summarized as follows;
Performance = 2.462 + 0.593 R_{ms} ***+ 0.405*** V_{ps} ***+ 0.109*** F_s ***+ 0.442*** K_{bvs} ***+ ε***

The results in table 5 show that adjusted R^2 was 0.641, which was used to establish the predictive power of the study model. This implied that 64.1% of the variation in performance was explained by knowledge-based value chain strategy, resource management strategy, value proposition strategy, and facility strategy. The remaining 35.9% of the variation in performance was explained by other variables other than the ones in the model. The P value for the F statistic in table 6 was 0.001< 0.05, which indicates that the overall model was significant in predicting the performance of management consultancy firms in Nairobi.

The regression results in table 7 for hypothesis one showed $\beta_=$ 0.593 and P-value of 0.001. The p-value being less than 0.05 implied that the alternate hypothesis was supported, implying that resource management strategy had a significant positive effect on the performance of management consultancy firms in Nairobi. The results for hypothesis two indicated $\beta_=$0.405 and a P-value was 0.000 and being less than the 0.05 significance level the alternate hypothesis was supported meaning that value proposition strategy had a significant positive effect on the performance of management consultancy firms in Nairobi. On the other hand, the results for hypothesis three reported a $\beta_=$ 0.109*,* and a P-value was 0.164. The P-value was greater than the 0.05 significance level. The study, therefore, failed to support the alternate hypothesis and concluded that facility strategy had no significant effect on the performance of management consultancy firms in Nairobi. The regression results for hypothesis four indicated $\beta_=$0.442 and P-value was 0. 017. It is noted that P-value was less than the 0.05 significance level. The study thus supported the alternate hypothesis and concluded that knowledge-based value chain strategy had a significant positive effect on the performance of management consultancy firms in Nairobi.

5. Discussions and Implications for Theory

The first objective of the study was to determine the effect of resource management strategy on the performance of management consultancy firms in Nairobi. The corresponding hypothesis ($H_{01)}$ was that resource management strategy has a significant effect on the performance of management consultancy firms in Nairobi. The P-value was 0.001 and being less than 0.05, and the alternate hypothesis was supported. This means that resource management strategy has a significant positive effect on the performance of management consultancy firms in Nairobi and therefore it was concluded that resource management strategy was a significant determinant of the performance of management consultancy firms in Nairobi. Theoretically, in line with the VRION Framework, the study identified two dimensions of the VRION Framework: value and organization specificity which were addressed through creating value and combining resources hence the postulates of RBV theory are well captured in this study, therefore, accounting for the positive effect on performance. The descriptive statistics reported that resource management strategy was practiced and emphasized at a moderate level in the management consultancy firms in Nairobi indicating that for these firms to realise maximum benefits from the resource management strategy, they must not only identify, attract and obtain the resources needed but must also be in a position to combine and configure them appropriately so as to create and deliver value to customers.

The findings on this hypothesis one make an important contribution to knowledge in strategic management in several ways. First, previous studies by Rose, Abdullah, and Ismad (2010); Kithusi (2015); Ombaka, Machuki, and Mahasi (2015) had indicated that there is a gap in the use of the construct of resources in general, the studies were in other sectors and that performance of management consultancy firms had not been directly linked to resource management strategy Through these finding the study provides an understanding on the link between resource management strategy and performance. Secondly, even though the previous studies were done on other sectors since their findings are in agreement with those of the current study, the current study provides evidence that the findings obtained earlier can be generalized in management consultancy firms in spite of their unique characteristics.

The second objective of the study was to assess the effect of value proposition strategy on the performance of management consultancy firms in Nairobi. The corresponding alternate hypothesis was that value proposition strategy has a significant effect on performance of management consultancy firms in Nairobi. Since the P-value was 0.000 being less than the 0.05 significance level the alternate hypothesis was supported and it was thus concluded that value proposition strategy has a significant positive effect on performance of management consultancy firms in Nairobi. These results were explained from different perspectives; From demographic characteristics results, most of the respondents were in the top management of the consultancy firms who are in close contact with their clients in the provision of services. They are, therefore, involved in identifying customer requirements and customer segment information; hence, they are in a position to develop strategies that would deliver the desired value and benefits to the targeted customers.

The descriptive statistics results indicate that value proposition strategy activities were emphasized and practiced to a moderate extent which was interpreted to mean that a consultancy firm that has a plan that identifies and communicates all the benefits to be provided to its customers, favourable points of difference between its benefits and those of its competitors and the benefits truly valued by customers are better prepared to deliver consultancy services. Theoretically, the RBV theory propositions were also supported through possession of unique resources that would facilitate identification of customers' benefits and their effective implementation hence accounting for the positive effect. These findings were found to be in line with the findings of other empirical studies which showed that value proposition strategy improves firm performance through improved customer engagement, understanding the clarity of value offered by the firm and increased effectiveness of marketing.

The findings in hypothesis two thus make a significant contribution to strategic management knowledge in several ways. The previous studies by Chandler, Broberg and Allison (2014); Payne and Frow (2014); Flaherty and Rappaport (2015); Ekman, Raggio and Thompson (2017) indicated that there has been a gap in the operationalization of the variable, the sector in which the studies were done and failure to show the relationship existing between value proposition strategy and firm performance. This study advances the level of understanding of the relationship between value proposition strategy and firm performance using management consultancy firms in Kenya by offering a clearer operationalization of the construct. The study findings also provide evidence for generalizability of the earlier research findings beyond the scope of focus of the current study of management consultancy firms to all consultancy firms.

The study also sought to evaluate the effect of facility strategy on the performance of management consultancy firms in Nairobi. The results show a P-value of 0.164 which is greater than 0.05 significance level thus the study failed to support the alternate hypothesis and concluded that facility strategy has no significant effect on the performance of management consultancy firms in Nairobi. These results were explained on the following basis; First, demographic characteristics results showed that the respondents were top management of the consultancy firms who were either partners, general managers, directors, or chief executive officers. They spend most of their time with clients either in client offices or outside the offices. Most of the work is done in the client's premises, or field work, especially for operations management and accounting and finance consultants, and these firms operate with few members of staff. This explains why these consultancy firms do not require a robust facility strategy, thus explaining why facility strategy has no significant effect on performance.

Secondly, descriptive statistics showed that facility strategy was at a moderate level of emphasis and practice in the management consultancy firms, which meant that firms that managed their facilities optimally achieved better results. Thirdly, the variable was anchored on RBV theory even though the study findings failed to support the propositions since investing in assets may not necessarily offer unique advantages to an organization especially if the firm does not need the assets as found out in this study. These findings raise an implication regarding decisions to invest in infrastructure among management consultancy firms. Since facility strategy is not significant, it becomes a point of interest to managers in the sector on why they should not prioritize investment on physical facilities to sustain their performance.

The findings in the hypothesis make a significant contribution to strategic management knowledge in several ways. The previous studies by Amaratunga and Baldry (2000); Chotipanich and Lertariyanun (2011); Fraser (2014); Myeda and Pitt (2014) indicate that there have been gaps in the way the variable has been operationalized, there have been gaps in failure to link facility strategy with performance, gaps in the sector in which the studies were conducted as some were conducted in education institutions and commercial banks which clearly need elaborate strategy on facilities and others were based on theoretical review thus lacking empirical support. The findings of this study add knowledge to strategic management through linking facility strategy with performance of management consultancy firms and also facilitates generalization of findings that facility strategy impacts the performance of organizations even though the extent of the impact depends on the sector in which the study is conducted.

In the fourth objective, the study sought to determine the effect of knowledge-based value chain strategy on the performance of management consultancy firms in Nairobi. The corresponding alternate hypothesis was that knowledge-based value chain strategy has a significant effect on the performance of management consultancy firms in Nairobi. The P-value of was 0.017 and being less than the 0.05 significance level study supported the alternate hypothesis and concluded that knowledge-based value chain strategy has a significant positive effect on the performance of management consultancy firms in Nairobi. The conclusion on this hypothesis was explained from different perspectives as follows: Demographically, the study established that the respondents were top management drawn from marketing consultants, human resource consulting, accounting and finance consultants and operations management consultants who provide knowledge-based services to clients. These services require expert knowledge which is created through employing appropriate knowledge value chain, which explains the relevance of knowledge-based value chain strategy on performance. The descriptive statistics showed that knowledge-based value chain strategy was emphasized and practiced at a low level by management consultancy firms. This was interpreted this to mean that since most management consultancy firms are small scale and mainly owner managed, information meant for decision making was retained by the top management who only disseminated relevant information to their subordinates.

Theoretically, the postulates of the social capital theory seem to be well applied in the sector since the respondents indicated that there is human interaction within the consultancy firms which facilitates the acquisition, sharing of knowledge among the employees and subsequent application of the knowledge so as to guarantee sustainable competitive advantage. Empirically, the study findings were consistent with the existing literature which show that acquisition, information technology, and organization of knowledge have a major role in boosting organizational performance. The findings on this hypothesis make an important contribution to knowledge in strategic management in that previous studies by Mohammad (2015); Mills and Smith (2011); Zeglat and Zigan, (2013) had indicated that there is a gap in the use of the construct of knowledge-based value chain in general, the studies were in other sectors, and that performance of management consultancy firms had not been directly linked to knowledge-based value chain strategy. This study provides an understanding of the link between knowledge-based value chain strategy and performance of management consultancy firms and provides evidence for generalizability of the research findings.

6. Conclusions and Recommendations

Based on the study findings, the study made the following three conclusions. First, the study concluded that management consultancy firms in Nairobi have developed and deployed various types of operations strategies: resource management strategy, facility strategy and value proposition strategy to a moderate extent and that knowledge-based value chain strategy was at the low extent of deployment. Second, the study concluded that the deployed resource management strategy, value proposition strategy, and knowledge-based value chain strategy have a significant positive effect on the performance of management consultancy firms in Nairobi while facility strategy had no significant effect on the performance of management consultancy firms in Nairobi. It is therefore prudent for these firms to integrate the various forms of operations strategy into their firms' overall strategy in order to boost their performance.

The findings of this study were limited to the management consultancy firms in Nairobi and may not be generalised to other management consultancy firms outside Nairobi. The study thus suggests that other studies be conducted in other contexts outside Nairobi and other countries. Secondly, the findings of the study are limited to management consultancy firms in Nairobi and may not be applicable to other forms of business organisations. This study thus suggests that other studies be conducted on other forms of business organisations such as commercial banks, insurance companies, and other forms of consultancy business. Finally, findings of the study were based on data collected for a period of five years from 2013 to 2017 and therefore may not be used to make long term inferences about the effect of operations strategy on performance of management consultancy firms. This period experienced drastic growth in the number of consultancy firms. For this reason, the majority of the consultancy firms were still in their infancy stage and not well established. Within the same period, Kenya conducted General elections which may have affected the operations and performance of these of these consultancy firms. The study, therefore, suggests that other studies be conducted covering a longer period beyond five years to determine whether the current findings are valid and provide a basis of generalization of the study findings.

References

Aaker, D. A. (2012). *Building strong brands*. New York. Simon and Schuster.

Al-Adaileh, R. M., & Al-Atawi, M. S. (2011). Organizational culture impact on knowledge exchange: Saudi Telecom context. *Journal of Knowledge Management*, *15*(2), 212-230.

Al-Qarioti, M. Q. A. (2015). The Impact of Knowledge Management on Organizational Performance: An Empirical Study of Kuwait University. *Eurasian Journal of Business and Management*, *3*(4), 36-54.

Amaratunga, D., & Baldry, D. (2000). Assessment of facilities management performance in higher education properties. *Facilities*, *18*(7/8), 293-301.

Anderson, J. C., Cleveland, G., & Schroeder, R. G. (2006). Operations strategy: a literature review. *Journal of Operations Management*, *8*(2), 133-158.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Bell, E., & Bryman, A. (2007). The ethics of management research: an exploratory content analysis. *British journal of management*, *18*(1), 63-77.

Bouncken, R. B., & Kraus, S. (2013). Innovation in knowledge-intensive industries: The double-edged sword of coopetition. *Journal of Business Research*, *66*(10), 2060-2070.

Bowman, C., & Ambrosini, V. (2003). *What does value mean and how is it Created, Maintained and Destroyed*? *Journal of management information systems,* 18(1), 185-214.

Boyer, K. K., & Lewis, M. W. (2002). Competitive priorities: investigating the need for trade-offs in operations strategy. *Production and operations management*, *11*(1), 9-20.

Cameron, T. Bateman, T. S., & Snell, S. (2014). *Management: Competing in the new era*. Burr Ridge, USA. Irwin Professional Publishing.

Carrillo, F. (Ed.). (2006). *Knowledge cities*. Routledge.

Chandler, G. N., Broberg, J. C., & Allison, T. H. (2014). Customer value propositions in declining industries: Differences between industry representative and high-growth firms. *Strategic Entrepreneurship Journal*, *8*(3), 234-253.

Cheruiyot, K. S. (2011). *The role of social media as a marketing tool for tourism in Kenya.* Case study: Kenya Safari and Tours. (Doctoral dissertation), University of Nairobi, Kenya.

Chotipanich, S., & Lertariyanun, V. (2011). A study of facility management strategy: the case of commercial banks in Thailand. *Journal of Facilities Management*, *9*(4), 282-299.

Daud, S., & Yusoff, W. F. W. (2010). Knowledge management and firm performance in SMEs: The role of social capital as a mediating variable. *Asian Academy of Management Journal*, *15*(2).

Dibrell, C., Craig, J. B., & Neubaum, D. O. (2014). Linking the formal strategic planning process, planning flexibility, and innovativeness to firm performance. *Journal of Business Research*, *67*(9), 2000-2007.

Dixon, J. R., Nanni, A. J., & Vollmann, T. E. (1990). The new performance challenge. *Business One Irwin, Burr Ridge, IL*.

Duarte, A. L. D. C. M., Brito, L. A. L., Di Serio, L. C., & Martins, G. S. (2011). Operational practices and financial performance: an empirical analysis of Brazilian manufacturing companies. BAR-Brazilian Administration Review, 8(4), 395-411.

Dunford, R. (2000). Key challenges in the search for the effective management of knowledge in management consulting firms. *Journal of Knowledge Management*, *4*(4), 295-302.

Ekman, P., Raggio, R., & Thompson, S. (2017). *Value Proposition Alignment: Estimating Sustainable Self-Service Technology Initiatives* (An Extended Abstract). In Creating Marketing Magic and Innovative Future Marketing Trends (pp. 153-158). Springer, Cham.

Field, A. (2009). *Discovering statistics using SPSS*. California, United States. Sage publications.

Fincham, R., Mohe, M., & Seidl, D. (2013). Management consulting and uncertainty: mapping the territory (Guest editors' introduction). *International Studies of Management and Organization*, *43*(3), 3-10.

Flaherty, M., & Rappaport, A. (2015). Agents of Change: Sustainability and Industry Trade Associations--An Evolving Value Proposition. *Available at SSRN 2669415*.

Fraser, N. (2014). *Justice interruptus: Critical reflections on the" postsocialist" condition*. Routledge.

Ghapanchi, A. H., Wohlin, C., & Aurum, A. (2014). Resources contributing to gaining competitive advantage for open source software projects: An application of resource-based theory. *International Journal of Project Management*, 32(1), 139-152.

Gottschalg, O., & Zollo, M. (2007). Interest alignment and competitive advantage. *Academy of Management Review*, *32*(2), 418-437.

Haynes, B., Nunnington, N., & Eccles, T. (2017). Processes: How real estate can support business processes, activities and work styles. In *Corporate Real Estate Asset Management* (pp. 95-117). Routledge.

Hill, B. (2018). Key Performance Indicators of the Management Consulting Industry. *https://yourbusiness.azcentral.com/key-performance-indicators-management-consulting-industry-16221.html.Accessed on 27th January 2018.*

Holsapple, C. W., & Oh, J. Y. (2013). *Reactive and Proactive Dynamic Capabilities: Using the Knowledge Chain. Knowledge Management and Competitive Advantage*: Issues and Potential Solutions: Issues and Potential Solutions, 1. United Kingdom.

Jacobs, B. W., Swink, M., &Linderman, K. (2015). Performance effects of early and late Six Sigma adoptions. *Journal of Operations Management*, *36*, 244-257.

Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring corporate strategy: text & cases*. London, UK. Pearson Higher Education.

Joppe, G. (2000). Testing reliability and validity of research instruments. *Journal of American Academy of Business Cambridge*, *4*(1/2), 49-54.

Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from performance measurement to strategic management: Part II. *Accounting horizons*, *15*(2), 147-160.

Keegan, D. P., Eiler, R. G., & Jones, C. R. (1989). Are your performance measures obsolete?. *Strategic Finance*, *70*(12), 45.

Khalili Shavarini, S., Salimian, H., Nazemi, J., & Alborzi, M. (2013). Operations strategy and business strategy alignment model (case of Iranian industries). *International Journal of Operations & Production Management*, *33*(9), 1108-1130.

Kilika, J. M., K'Obonyo, P. O., Ogutu, M., & Munyoki, J. M. (2012). Towards Understanding the Design of Human Resource Development Infrastructures for Knowledge Intensive Organizations: Empirical Evidence from Universities in Kenya. *DBA Africa Management Review*, *2*(2).

Kipping, M., & Clark, T. (Eds.). (2012). *The Oxford handbook of management consulting*. Oxford, UK. Oxford university press.

Kithusi, A. N. N. (2015). *Firm resources, external environment, entrepreneurial strategy and performance of Micro, small and medium furniture sector enterprises in Nairobi city county, Kenya* (Doctoral dissertation) University of Nairobi, Kenya.

Kloot, L., & Martin, J. (2000). Strategic performance management: A balanced approach to performance management issues in local government. *Management Accounting Research*, *11*(2), 231-251.

Ling, F. Y., & Gui, Y. (2009). Strengths, weaknesses, opportunities, and threats: Case study of consulting firms in Shenzhen, China. *Journal of Construction Engineering and Management*, *135*(7), 628-636.

Luz Martín-Peña, M., & Díaz, E. (2011). Typologies and taxonomies of operations strategy: a literature review. *Management research news*, *31*(3), 200-218.

Melby, M. (2015). *Beyond the low-skill equilibrium*? A case study of the local content policy in the Brazilian oil and gas industry.

Mills, A. M., & Smith, T. A. (2011). Knowledge management and organizational performance: a decomposed view. *Journal of knowledge management*, *15*(1), 156-171.

Mohammad, A. W., Teow, Y. H., Ang, W. L., Chung, Y. T., Oatley-Radcliffe, D. L., & Hilal, N. (2015). Nanofiltration membranes review: Recent advances and future prospects. *Desalination*, *356*, 226-254.

Monavvarian, A., Asgari, N., Akhavan, P., & Ashena, M. (2013). Developing social capital for facilitating knowledge management practices. *International Journal of Social Economics*, *40*(9), 826-844.

Mugenda, O. M. (2009, March). Higher education in Kenya: Challenges and opportunities. In *A Paper Presented at AHEC Meeting* (Vol. 30).

Mukkamala, A. M., & Razmerita, L. (2014). Which factors influence the adoption of social software? An exploratory study of Indian information technology consultancy firms. *Journal of Global Information Technology Management*, *17*(3), 188-212.
Mungai, G. W. (2012). *Business Consultancy Services and Performance of KPMG top 100 small and medium enterprises in Kenya* (Doctoral dissertation, School of Business, University of Nairobi).
Myeda, N. E., & Pitt, M. (2014). Facilities management in Malaysia: Understanding the development and practice. *Facilities*, *32*(9-10), 490-508.
Myeda, N. E., & Pitt, M. (2014). Facilities management in Malaysia: Understanding the development and practice. *Facilities*, *32*(9-10), 490-508.
Nawaz, M. S., Hassan, M., &Shaukat, S. (2014). Impact of knowledge management practices on firm performance: Testing the mediation role of innovation in the manufacturing sector of Pakistan. *Pakistan Journal of Commerce and Social Sciences*, 8(1), 99-111.
Nikolova, N., Reihlen, M., & Schlapfner, J. F. (2009). Client–consultant interaction: Capturing social practices of professional service production. *Scandinavian journal of management*, *25*(3), 289-298.
Ombaka, B., Machuki, V. N., &Mahasi, J. (2015). Organizational Resources, External Environment, Innovation and Firm Performance: A Critical Review of Literature. *DBA Africa Management Review*, 5(1).
Oparanma, A. O. (2010). The organizational culture and corporate performance in Nigeria. *International Journal of African Studies*, *3*, 34-40.
Osterwalder, A., & Pigneur, Y. (2010). *Business model generation*: a handbook for visionaries, game changers, and challengers. New Jersey, United States. John Wiley & Sons.
Payne, G. T., Moore, C. B., Griffis, S. E., & Autry, C. W. (2011). Multilevel challenges and opportunities in social capital research. *Journal of Management*, *37*(2), 491-520.
Purce, J. (2014). The impact of corporate strategy on human resource management. *New Perspectives on Human Resource Management* (Routledge Revivals), 67.
Rao, K. R. M. (2011). *Services marketing*. Pearson Education India.
Rasula, J., Vuksic, V. B., & Stemberger, M. I. (2012). The impact of knowledge management on organizational performance. *Economic and Business Review for Central and South-Eastern Europe*, *14*(2), 147-161.
Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of management*, *35*(3), 718-804.
Rose, R. C., Abdullah, H., & Ismad, A. I. (2010). A Review on the Relationship between Organizational Resources, Competitive Advantage and Performance. *Journal of International Social Research*, *3*(11), 901-915.
Rumelt, R. P. (1984). Towards a Strategic Theory of the Firm. Competitive strategic management. *Competitive strategic management*, 15(8), 556-570.
Saunders, M. N. (2011). *Research methods for business students,* 5thEd. Pearson Education India.
Sekaran, U., & Bougie, R. (2010). Theoretical framework in theoretical framework and hypothesis development. *Research methods for business: A skill building approach*, *80*.
Shehu, A. M., & Mahmood, R. (2014). Influence of entrepreneurial orientation and business environment on small and medium firm performance: a pls approach. *Advances in Management and Applied Economics*, *4*(4), 101.
Shi, L., Ye, K., Lu, W., & Hu, X. (2014). Improving the competence of construction management consultants to underpin sustainable construction in China. *Habitat International*, *41(6)*, 236-242.
Slack, N. (2015). *Operations strategy*. John Wiley & Sons, Ltd.
Spanos, Y. E., & Lioukas, S. (2001). An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic management journal*, *22*(10), 907-934.
Srinivasan, R. (2014). The management consulting industry: Growth of consulting services in India: Panel discussion. *IIMB Management Review*, *26*(4), 257-270.
Tanui, J. K. (2015). *Interaction between Information Technology Capability, Environmental Conditions and Competitiveness of Consultancy Firms in Nairobi County, Kenya* (Doctoral dissertation, school of business, Kenyatta University).
Tanui., K. J. & Kilika., M. J. & Mugambi., M. G. (2016). Deployment of Information Technology Capabilities and Competitiveness of Consultancy Firms in Nairobi County, Kenya. *International Journal of Arts and Entrepreneurship Vol. 5, (1). Pp 111 - 136.*
Walsman, M., Brandon-Jones, A., Lewis, M., & Verma, R. (2015). Examining the characteristics and managerial challenges of professional services: an empirical case study of management consultancy in the travel, tourism, and hospitality sector. In *QUIS Conference*.
Wandiga, E. N., Kilika, J. M., & James, R. (2017). Firm Performance in the Context of Knowledge Based Intensive Sector: A Theoretical Review. *International Journal of Business and Management*, *12*(8), 234.
Ward, P. T., Duray, R., Keong Leong, G., & Sum, C. C. (1995). Business environment, operations strategy, and performance: an empirical study of Singapore manufacturers. *Journal of operations management*, *13*(2), 99-115.
Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180.

Wheelen, T. L., & Hunger, J. D. (2010). Strategic Management and Business Policy–Achieving Sustainability International Edition.

Zeglat, D., & Zigan, K. (2013). *Intellectual capital and its impact on business performance: Evidences from the Jordanian hotel industry*. Tourism and Hospitality Research, 13(2), 83-100.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 489-498
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.103

Impact of Tunisian Revolution on the Relationship Between Macroeconomic Factors and Mutual Funds Performance

Marwa Zouaoui[1]

[1] ISG, University of Tunis, Tunis, Tunisia

Correspondence: Hight Institute of Tunis-ISG, University of Tunis, Tunis, Tunisia. Tel: +21627668506. E-mail: marwazoua@gmail.com

Abstract
This paper aims first at determining the different macroeconomic factors that explain the variability of Tunisian mutual funds (UCITS) returns in the period of 2006 - 2016. Second, the paper tries to determine the effect of the Tunisian revolution on the relationship between the studied macroeconomic factors and returns of these investment funds. To this end, we will compare the impact of these variables on returns during the pre- and post-revolution period. The results show that all the macroeconomic factors significantly explain the variation of Tunisian UCITS funds returns. Moreover, the results reveal that the revolution has a significant impact on the relationship between our macroeconomic factors and returns. We also found that the impact of macroeconomic variables on UCITS funds returns, before and after 2011, is not the same. These findings may bear on the political, security, social, and economic instability that has been observed in Tunisia since 2011 and which has significantly influenced the studied macroeconomic factors.

Keywords: Macroeconomic Factors, Arbitrage Pricing Theory, Regression Analysis, Revolution

1. Introduction

Modern financial theory recommends the intelligent allocation of financial assets to be in line with the risk that the investor is willing to take. This theory assumes that movements of stock prices are very sensitive to the evolution of systematic state variables. The modern financial theory argues that systematic variables are the primary source of risk, in that over the long term, financial returns should reflect the evolution of these variables. These systematic risk factors are often conditioned by economic conditions.

Nevertheless, not all professionals and financiers agree on these factors as constituting financial assets pricing models. It is under this perspective that a large number of researchers have focused on determining why returns vary. Accordingly, a huge financial literature has been developed focusing more specifically on the relationship between exogenous variables, specifically macroeconomic indicators, and stock market returns (Cherif and Gazdar

(2010), Raza et al. (2015), Nisha (2015), Barakat et al. (2016), Ulah et al. (2017), Khan and Khan (2018) and Akbar et al. (2018)). However, despite the panoply of studies examining the effect of macroeconomic variables on stock prices, there is a gap in the literature on the relationship between macroeconomic variables and Tunisian UCITS funds. This latter gap motivated us to contribute to the literature in this area.

Then, our aim is to examine the relationship between macroeconomic variables and the returns of Tunisian UCITS funds during the 2006 to 2016 period. Specifically, we try to determine the relevant macroeconomic factors that explain the variation of Tunisian UCITS returns. Second, we try to determine the impact of the 2011 Tunisian revolution on the relationship between these macroeconomic factors and the returns of Tunisian UCITS funds. The expected results will be useful for investors for two main reasons. First, they can help them bring to the table the best-enlightened investment strategies. Second, determining risk factors will help these investors to estimate returns of assets and funds and to make the most appropriate decisions.

The rest of this paper is structured as follows: section 2 reviews the literature and presents the relationship between these macroeconomic variables and stock returns; Section 3 presents our methodology in terms of sample, models and the used empirical tests; Section 4 reports the results and discusses the relationship between the macroeconomic factors and returns of Tunisian UCITS funds before and after the 2011 revolution; Section 5 concludes the paper.

2. Literature Review:

In the late 1970s, Ross developed an alternative multifactorial model called Arbitrage Pricing Theory (APT). This model was developed to minimize total risk by using macroeconomic variables. It refers to two basic hypotheses. The first hypothesis assumes no arbitrage opportunity. The second hypothesis assumes that it is possible to model the expected profitability of stock by a linear function linking the different macroeconomic or fundamental factors, weighted according to their impact on the stock by a specific beta coefficient. It should be noted that the main difficulty about the use of APT remains the origin and choice of factors. For this reason, APT suggests that understanding the macroeconomic context is essential for investors to make efficient investment decisions. Hence, the criticism to this model is its inability to determine the nature of the risk factors that bear on stock returns.
As a result of the limitations of and the multiple criticisms to APT, advanced research agreed that the factors that affect stock market performance are fundamental and macroeconomic factors. These multi-factorial pricing models are different versions of the APT theory.

To obtain better estimates of risk premiums associated with beta and market anomalies, macroeconomic variables were introduced into performance measures. Chen et al. (1986) are the first to study the impact of macroeconomic models on the returns of US stocks. Their study has had a profound influence, particularly the choice of macroeconomic factors. These authors show that fluctuations in stock market returns are logical responses to changes in systemic economic and financial factors. As a result, financial compensation for holding a risky asset depends on the degree of exposure of that asset to macroeconomic risks. The approach of Chen et al. (1986) consists first of all in identifying the macroeconomic variables likely to have a systemic influence on returns, then in estimating the APT of these variables using monthly data. Chen et al. (1986) conclude that macroeconomic factors like industrial production, changes in future interest rates, changes in expected inflation, unexpected inflation and changes in risk premium correlate with high-risk premiums that significantly explain stock returns. On the other hand, they find that the index of oil price and the market index haven't overall effect on asset pricing. Some researchers added other variables to the Chen et al. 's model. For example, examining the Japanese market, Hamao (1988) added two variables to the Chen et al. 's model. These are investor confidence and the exchange rate. Applying the APT method, the author found that only change in unexpected inflation, default risk premium, and interest rate have a significant effect on the Japanese stock market.

It should be mentioned that the impact of macroeconomic variables on stock market returns is not the same in all countries. According to Drake et al. (2006), there are variables that perfectly explain variation in returns in a range of developed countries and which are not significant in developing countries. Such a difference may be justified by the fact that most developing countries do not have a well-functioning stock market. Moreover, in these markets, transaction costs are high, while transactions and information are less transparent.

Pilinkus and Boguslauskas (2009) used the APT model to study the Lithuanian stock market. They examined the relationship between the stock market index and 40 macroeconomic variables in order to check whether the chosen macroeconomic variables can explain significantly stock market returns in Lithuania. Unlike Chen et al. (1986), the authors use Granger causality tests to highlight the causal link between these variables. Their results show that only some variables, like GDP (gross domestic product), foreign direct investment and net exports, perfectly explain the change in stock market returns. However, Cherif and Gazdar (2010) examined the macroeconomic variables of 14 Middle Eastern and North African countries. They found that savings rates, banking sector development, and market liquidity have a positive impact on stock market development, while interest rates have a negative impact on stock market development. They also found that the relationship between the inflation rate and stock market returns is not significant in the MENA region, particularly in Tunisia.

Moreover, Raza et al. (2015) studied the impact of some economic variables on the Pakistani stock market between 1976 and 2011. Using a Panel regression, they found that income, savings rate, and liquidity positively affected the stock market. Barakat et al. (2016) examined the relationship between the stock market and macroeconomic variables in Egypt and Tunisia over the January 1998 to January 2014 period. Their results point to a close relationship between the stock market and the different macroeconomic variables, like exchange rate, money supply, and interest rate.

Ulah et al. (2017), examining the 2005-2015 period, show that macroeconomic variables, like exchange rate, foreign exchange reserve, and interest rate, have a significant impact on the stock market returns of South Asian countries (SAARC). However, they showed that inflation has no effect on the stock markets of the same countries. Kwofie and Ansah (2018) used the autoregressive distributed lag (ARDL) cointegration technique and the error correction parameterization of the ARDL model for examining the effect of from January 2000 to December 2013 exchange rate and inflation on stock market returns in Ghana. Their work showed a significant relationship between Ghana Stock Exchange returns and inflation only in the long term. However, their work also presented a significant long- and short-run relationship between stock market returns and exchange rate.

Jeat and Hassan (2019) focused on the relationship between the Malaysian stock market and the interest rate, exchange rate, and money at the period of 2012-2016. They found that the stock market is affected by these three factors but at a different degree. The most influential factor was the exchange rate as the Malaysian Ringgit is decreased in value, transfer the panic to the local market.

Some studies focused on the relationship between a single macroeconomic variable and stock market returns. For example, Fama (1981) identifies the inflation rate as a factor that could affect market returns. They stipulate that an increase in inflation rate negatively affects stock market activity. On the other hand, some authors like Boudoukh and Richardson (1993) examined this relationship in the short and long term. Their results point to a negative relationship between inflation rate and short-term stock returns, but in the long term, this relationship tends to become positive.

There is another trend of research that has focused on the effect of exchange rate on stock market returns. Cho et al. (2016) relate the exchange rate to stock market returns. According to these authors, exchange rate fluctuations affect stock prices because of their influence on cash flow and the international competitiveness of companies, as well as on capital flows both internal and external.

Examining the Indian market, Rafay et al. (2014) found a unidirectional relationship between exchange rate and the Indian stock index. Although much of the literature focuses on a one-way relationship between stock prices and exchange rates, other more recent research, like that of Chkili and Nguyen (2014), admit the joint endogeneity of these two variables.

3. Data and Econometric Methodology

3.1. Study Period

Our study focuses on the Tunisian stock market, in particular, the monthly returns of Tunisian UCITS observed during the February 2006 to December 2016 period. Observations are monthly data on net asset values of Tunisian UCITS funds, collected from the Financial Market Council[1].

It should be remembered that the Tunisian stock market has been recently affected by several shocks. On the one hand, the Tunisian uprising of January 2011 caused a decrease of (-12.74%) in the TUNINDEX index, which induced a considerable loss of confidence and a climate of uncertainty that loomed over the stock market and the entire financial and economic sphere. On the other hand, after the uprising, the country went through a period of difficult political transition, followed by very intense economic conditions and insecurity shocks like terrorism, political assassinations, and social upheavals. These shocks considerably affected the TUNINDEX index, which, after each shock, witnessed sudden falls.

The 2011 and 2016 period is then marked by several disruptions and shocks for the Tunisian stock market, encouraging us to take a closer look at it and compare it to the period preceding January 2011.

During the observation period, the number of mixed UCITS funds in activity is variable, because each year, new similar investment funds are created and others went bankrupt. In order to avoid survival bias problems, and to build up our database, we eliminated all UCITS created after February 2006 and those who disappeared or were overtaken during the study period. Hence, the final sample consists of 22 mixed UCITS funds.

3.2. Methodology

We were inspired by Chen et al. (1986) and Nisha (2015) then selecting the macroeconomic variables that bear on stock market activity. The choice of macroeconomic variables is motivated by two important reasons. First, these variables are commonly used in the literature to examine the theoretical relationships between the stock market and economic activity (Chen et al., 1986, Pilinkus and Boguslauskas, 2009, Nisha, 2015, Barakat et al. 2016 and Akbar 2018.). Second, the data of these variables are available in a monthly frequency either in the Central Bank of Tunisia or in the National Institute of Statistics records.

3.2.1. Regression Model

A regression is used to study the effect of the selected variables on the returns of the 22 Tunisian mixed UCITS funds. The regression equation is a multi-channel function, whose goal is to estimate the 9 beta (β) of 22 UCITS funds observed during 11 consecutive years (2006-2016).

The time-series regression model is as follows:

$$R_{it} = \alpha_i + \beta_{TCM} MIP_t + \beta_{TA} AIP_t + \beta_{INF} INF_t + \beta_{TERM} TERM_t + \beta pv\, MISP_t + \beta_{MM} MMR + \beta_{TCE} MLBE_t + \beta_{\$} USDTUND_t + \beta_{TUN} TUNINDEX_t + \varepsilon_t \quad (1)$$

with t = February 2006,.., December 2015 ; i = 1..,119;

Where $\boldsymbol{\alpha}_{i}$ is a constant term. $\boldsymbol{\beta_{TCM}}$, $\boldsymbol{\beta_{TA}}$, $\boldsymbol{\beta_{INF}}$, $\boldsymbol{\beta_{TERM}}$, $\boldsymbol{\beta_{pv}}$, $\boldsymbol{\beta_{TCE}}$, $\boldsymbol{\beta_{\$}}$, $\boldsymbol{\beta_{TUN}}$ are successively the sensitivity coefficients of macroeconomic factors. ε_{it} is an idiosyncratic error term. The measurements of selected macroeconomic factors are listed in Table 1.

[1] https://www.cmf.tn/

Table 1. Macroeconomics variables

Symbol	Factors	Measurement
MIP AIP	Monthly growth rate of industrial production Annual growth rate of industrial production	log (PI_t) - log(PI_{t-12}) log(PI_t) - log(PI_{t-12}) IP: index of industrial production.
TERM	Term structure of interest rates	$BTLT_{10t}$- TRE_{t-1} $BTLT_{10t}$ is the weighted average monthly rate of 10-year treasury bills.
INF	Inflation rate	log (IPC_t) - log(IPC_{t-1}) IPC: the consumer price index
MMR	Money market interest rate	MM_t -INF_t
MLBE	Monthly growth rate of loans granted by banks to the economy	$log\ (\frac{LE_t}{LE_{t-1}})$ LE: loans granted banks to the economy
MISP	Monthly growth rate of the industrial selling price index	$(ISP_t\text{-}ISP_{t-1})/ ISP_{t-1}$ ISP :the industrial selling price index
USD/TND	Exchange rate	$log\ (\frac{TC_t}{TC_{t-1}})$

4. Interpretation of results:

4.1. Data analysis

Table 2 presents the average monthly returns of the 22 Tunisian mixed funds, and the macroeconomic variables are positive. The results show that the variable (TERM), which represents future interest rates, has a high average of (346%).

The variable (USDTND) has a low average of 0.1%. This factor varies between -1.9% and 0.7% throughout the study period. The average of the other 20 funds does not exceed 5%, and their variances do not exceed 6% except for the variable (TERM).

The Skewness coefficient of the average returns of the UCITS (Ri) is small but positive with a value greater than zero, indicating that the distribution is skewed to the right, while the Skewness coefficient of most macroeconomic variables is negative, indicating that the distribution is skewed to the left.

Nevertheless, the Kurtosis coefficient of all the variables (in particular Rit, MIP, AIP, TCMIP, and TUNINDEX) is greater than 3, which means that the distribution is leptokurtic. As for the variables with a Kurtosis coefficient less than 3, like INF, MLBE, and USDTND, the distribution is platykurtic.

Table 2. Descriptive statistics of macroeconomic variables and Tunisian UCITS returns

Variables	Average	Variance	Min	Max	Skewness	Kurtosis
Rit	0,00285	0,0224	-0,1361	0,1479	0,0092	7,445
MIP	0,005012	0,0561	-0,1674	0,1472	-0,9134	3,768
AIP	0,0202	0,0543	-0,1457	0,15019	-0,1389	3,582
INF	0,0448	0,00988	0,02193	0,0696	-0,1919	2,175

TERM	3,465	0,5977	2,169	4,2	-0,8476	3,015
MMR	0,0424	0,0065	0,02367	0,0548	-0,633	3,015
MISP	0,0036	0,00605	-0,0193	0,02874	0,3087	6,465
MLBE	0,008431	0,00585	-0,0044	0,02302	0,1566	2,6022
USDTND	0,001518	0,00797	-0,01927	0,0248	0,3279	-0,34
TUNINDEX	0,010038	0,0394	-0,1329	0,1001	-0,3406	4,2512

Note: this table reports the descriptive statistics of the average monthly returns of the 22 Tunisian mixed UCITS and of the 9 macroeconomic variables between 2005 and 2015.

4.2. Correlation matrix

In order to check dependency between the variables and UCITS funds returns at the same time, we make recourse to correlation analysis.

Table 2. Correlation analysis of macroeconomic variables with the performance of Tunisian UCITS: Appendix 2

Variables	Rit	MIP	AIP	INF	TERM	MMR	MISP	MLBE	USDTND	TUNINDEX
Rit	1									
MIP	-0,0422	1								
AIP	0,0657	0,1993	1							
INF	-0,051	-0,013	0,0848	1						
TERM	0,0861	-0,1124	-0,0039	-0,1125	1					
MMR	-0,0477	-0,036	0,1535	-0,2112	-0,4269	1				
MISP	-0,0054	0,029	0,2289	0,0828	-0,0905	0,0827	1			
MLBE	0,0198	0,0009	0,0639	-0,1256	0,1676	-0,0307	0,23	1		
USDTND	-0,0143	-0,0046	-0,0187	0,1636	-0,123	-0,081	0,2452	0,1142	1	
TUNINDEX	0,3665	-0,062	0,1032	-0,0536	0,1021	0,0043	0,0335	-0,0257	-0,0375	1

In Table 3, there are some variables that positively (but weakly) correlate with UCITS funds returns. These are monthly industrial production growth rate, savings return rate, credits growth rate, and the benchmark Tunis Stock Exchange index.

The TUNINDEX is the most correlated variable with UCITS funds returns, with a coefficient of (0.3665). Since the correlation coefficient is less than 0.5, this relationship between the returns and the TUNINDEX variables is still low. The positive correlation between UCITS funds returns and the TUNINDEX is predictable, as many of the stocks held by the UCITS are quoted in the TUNINDEX. All the correlation coefficients of the macroeconomic factors are less than 0.79, which means that there is no multicollinearity problem.

4.3. Regression results

In order to take into account the specificity of the stock market and the Tunisian economy, we added some variables to the model of Chen et al. (1986), like exchange rate (USDTND), the credits monthly growth rate granted by banks to the economy (MLBE) and the TUNINDEX returns. The results on the effect of our variables are reported in Tables 4 and 5.

Table 4. Descriptive statistics

	R^2	Prob-F	F-Fisher
Before the Tunisian revolution	0,3314	0	70,92
After the Tunisian revolution	0,0612	0	9,33
The whole period (2006-2015)	0,142	0	48,09

Note: This table presents the coefficient of determination R^2, the associated probability, and F-Fisher of the time-series regression for 22 mixed Tunisian UCITS between February 2005 and December 2016.

In Table 4, the significance of the model over the entire period is observed as Fisher's statistic is high (48.09), and so is its associated probability (0.000) of less than 5%.

The studied nine independent variables explain 14.2% of the variability of UCITS funds returns, as indicated by the coefficient of determination R^2 over the entire study period. Before the revolution, exogenous variables account for 33.14% of UCITS returns. However, after the revolution, these variables decreasingly explain 6.12%. Hence, the model's fit before January 2011 is more robust than after January 2011.

This means that after the revolution, some macroeconomic variables become, to some extent, unable to explain returns. This result can be explained by several reasons. The first reason is political, security, and social instability. In fact, political instability as a result of the political transition process, the impact of the unstable situation in Libya and the security threats and terrorist attacks that Tunisia has experienced, threw the country into uncertainty. The second reason is the disruptions that have extremely affected economic activity (mainly trade union demands). This has disrupted industrial production and the export of goods and services in all key sectors. These disruptions have also affected the functioning of several public and private firms and institutions. More specifically, this has affected companies' profitability and competitiveness, which is reflected in stock prices, and eventually in the stock market performance as a whole.

Table 5 reports the results of the estimation of the model's parameters of the macroeconomic factors, after running the time-series regression of the 22 mixed UCITS funds. We note that before the revolution, the macroeconomic variables MIP, AIP, TERM, USDTND, and TUNINDEX are significant, as they perfectly explain the variation of Tunisian mixed UCITS returns.

Before the revolution, the variables most significant at the 1% level are: the monthly growth rate and the industrial production growth rate (MIP), (AIP), future interest rates (TERM) and the stock market index (TUNINDEX).
The monthly industrial production growth rate (MIP) has a negative and statistically significant effect on Tunisian UCITS funds returns. This can be translated by a 1% increase in the (MIP) rate, which generates an average decrease in Tunisian UCITS returns by 6%. After the revolution, this rate became insignificant. It is assumed that this negative relationship (before the revolution) is a result of the small number of industrial firms held by UCITS or listed on the stock market. This is because most of the industrial firms in Tunisia are small and medium-sized enterprises. This is being said, and the (MIP) rate does not represent the growth rate of all industrial firms in Tunisia.

Table5. Time-series regression of the macroeconomic variables before and after the revolution

	Before the Tunisian revolution		After the Tunisian revolution		The whole period (2006-2016)	
	β	t	β	t	β	t
MIP	-0,0653 **	0	-0,0133	0,299	-0,01249	0,098

AIP	0,0241**	0,009	-0,074**	0	0,02173**	0,008
INF	0,0746	0,328	0,1808*	0,018	-0,10103*	0,024
TERM	0,011**	0,001	-0,0057**	0	0,000442	0,624
MMR	0,2092	0,163	-0,786**	0	-0,2048**	0,006
MISP	-0,0578	0,549	-0,0595	0,645	-0,09505	0,195
MLBE	0,0447	0,619	0,619**	0	0,0822	0,266
USDTND	0,125*	0,035	-0,221*	0,027	0,02134	0,694
TUNINDEX	0,306**	0	0,244	0,123	0,01173**	0

Note: This table presents the following time-series regression: $R_{i\,t} = \alpha_i + \beta_{Mip}\,MIP_t + \beta_{AIP}\,AIP_t + \beta_{INF}\,INF_t + \beta_{TERM}\,TERMt + \beta sp\,MISP_t + \beta_{LBE}\,MLBE_t + \beta_{\$}\,USDTUND_t + \beta_{TUN}\,TUNINDEX_t + \varepsilon_t$ for each of our 22 reference portfolios . The significance of the coefficients is denoted by *: significant at the 5% level; **: significant at the 1% level.

As for the annual industrial production growth rate (AIP), it has a positive impact on UCITS returns before the revolution. In our opinion, this result reflects the reality of the Tunisian economy. As it is well known that industrial production is the driving engine of economic activity and growth in Tunisia, an increase in this rate implies an increase in growth factors such as investment, savings, and exportation. Consequently, this increase implies an increase in financial returns and of course, UCITS returns.

On the other hand, the variable (AIP) has a negative impact on Tunisian UCITS returns after the revolution. In our view, it seems that after the 2011 revolution, our results reflect a decline in industrial production in the country (due to several constraints such as trade unions' strikes). This decrease forced companies to reinvest their capital gains or place new investments in the stock market or in UCITS. The reason seems to be diversifying investments in other sectors for fear of replacing these funds into the company, as confidence in the economic system is strongly felt by investors. As a result, UCITS returns saw an increase.

We notice that the annual industrial production growth rate (AIP) has a significant effect, unlike the monthly rate. This result is expected because, on the one hand, the impact of industrial activity on the stock market or on the investment fund industry is not immediate, as is often the case with other independent variables. On the other hand, the pace of production of Tunisian companies is an annual output.

Before the revolution, future interest rates (TERM) positively correlate with UCITS returns, whereas after the revolution, they negatively correlate with these returns. Our post-revolution results are consistent with the conclusions of Modigliani (1971), who indicate that when the (TERM) rate decreases, it is obvious that deposit accounts (bank ...) no longer offer an attractive remuneration, which drives savings away from deposit accounts and channels them into the stock market at the expense of banks. Hence the increase in stock prices.

As for the variable (MMR), which is the reference rate that is the closest to the real interest rate, it changed after the revolution, scoring a significant effect. We also note that this variable negatively correlates with Tunisian UCITS returns. As noted above, if the (MMR) decreases, then deposit accounts no longer offer attractive remuneration, which will drive savings out of the deposit accounts and channel them into the stock market at the expense of banks and vice versa. As a result, returns on assets (and mutual funds) have increased significantly.

In addition to the variables (TERM) (MMR), the variable (MLBE) also correlates with the banking sector. It has a positive impact on UCITS returns. This is true after the revolution, as this variable is not significant before the revolution with (t = 61.9%). Being positively correlated with the variable (MMR) (in Table 4), a change in (MLBE) has an effect similar to that of the interest rate on UCITS returns. We assume that when banks grant more loans to companies, this leads them to increase their investments, then invest the generated profits in UCITS or directly on the stock exchange, hence the increase in returns.

Another variable that has a very significant (at the 1% level) and a positive effect on Tunisian UCITS returns before the revolution is the TUNINDEX index growth rate. In other words, an increase in the TUNINDEX by 1% leads to an increase of 30.6% in UCITS returns. It seems to us then that this variable has a significant effect on UCITS returns before the revolution because UCITS invested in most listed companies. However, after the revolution, the relationship between UCITS returns and TUNINDEX is insignificant, as UCITS invested indifferently in unlisted companies and listed companies. One can assume that after the Tunisian revolution, banks, being the main managers of the UCITS, heavily gambled on the TUNINDEX, making its correlation with returns no longer real.
Moreover, the variable that has an effect on UCITS returns significantly at the 5% level is the exchange rate (USDTND). We notice that the effect among these variables varies over time. Prior to January 2011, an increase of this variable by 1% has a positive effect on UCITS returns, which in turn increased by 12.5%. Conversely, after January 2011, this variable has a negative effect on UCITS returns. Hence, an increase of 1% leads to a decrease in UCITS returns by 22.1%.

Tentatively, we also assume that after the revolution, the negative relationship between the USDTND and UCITS returns is explained by two main reasons: on the one hand, by the abnormal and rapid devaluation of the dinar and, on the other hand, by an increase of imports onto the Tunisian market. More specifically, when imports increased, and foreign currency rate (USD / TND) increased too, this has had a negative impact on the returns of importing companies and necessarily on Tunisian UCITS returns. These latter are represented inter alia by importing and exporting companies.

As for Inflation Rate (INF), the results show that before January 2011, this variable has a very low effect. We can even say that this variable is not significant since (t = 32.8) is quite high. These results confirm the results of Cherif and Gazdar (2010) on the non-significance of inflation in determining stock market returns in the MENA region and in particular in Tunisia.

In our opinion, before the revolution inflation rate was stable, or we can even say that inflation does not exist. Hence, the reason why this variable is not statistically significant. However, after January 2011, the variable (INF) becomes significant as the inflation rate increased sharply, thus making Tunisian UCITS returns variable. In addition, we found that the sensitivity coefficient of this variable increased (β_{INF} =0,18), which means that it positively correlates with Tunisian UCITS returns. The only variable in our model that is not significant before and after January 2011 is the selling price index growth rate (MISP).

5. Conclusion

In order to examine the impact of the Tunisian revolution on the relationship between macroeconomic variables and Tunisian UCITS funds returns before and after the revolution, we applied empirical models and tests inspired by the work of Chen et al. (1986) and Nisha (2015). We drew several conclusions. First of all, we found that Tunisian UCITS returns are not affected uniquely by market risk, but rather by macroeconomic factors. The macroeconomic factors that significantly explain the variation of Tunisian UCITS funds returns are: the monthly growth rate and the annual industrial production growth rate, inflation, future interest rate, and the monthly exchange rate change and the TUNINDEX. We found that the impact of macroeconomic variables on UCITS returns, before and after 2011, is not the same, as significance is lost. Some variables, like (MIP) and (TUNINDEX), significantly explain Tunisian UCITS returns before the revolution and no longer do so after the revolution.

We also found that before the revolution other variables, like (AIP), (TERM) and (USDTND), had a positive impact on UCITS returns, while after the revolution this relationship became negative. In addition, we found that there are a number of variables (INF, MMR, and MLBE), that were insignificant before 2011, which became later significant. This means that after the revolution, these variables perfectly explain variation in stock market returns. We conclude that each of the studied variables affects UCITS funds returns with a different degree. Finally, we also found that the revolution has a considerable effect on the relationship between the macroeconomic variables and Tunisian UCITS funds returns. This result can be explained by several reasons: indeed, Tunisia evolves in a context of deep changes, which touch upon the social, political, and economic fabric of the country. This is coupled with the international constraints, increasingly observed after globalization and the country's openness to its external environment. Accordingly, political, security, and social instability had a decisive impact on the variation of macroeconomic factors. In addition, it is the turbulent economic activity, including the production and export of goods and services in all key sectors, that affected variables such as industrial production, selling price index, and exchange rate. All this together ultimately affects directly or indirectly profitability of companies and their competitiveness, which will subsequently bear on stock prices, and eventually on UCITS funds returns.

References

Akbar, M.I., Butt, A.R. & Chaudhr, A.F. (2018). An Empirical relationship between Macroeconomic Indicators and Pakistan Stock Market: 1992-2012. International *Journal of Computer Science and Network Security,*18, 17-26

Barakat, M. R., Elgazzar, S. H. & Hanafy, K. M. (2016). Impact of Macroeconomic Variables on Stock Markets: Evidence from Emerging Markets. *International Journal of Economics and Finance*,8, 916-971.

Boudoukh, J. & Richardson, M. (1993). Stock Returns and Inflation: A Long-Horizon Perspective. *American Economic Review,* 83, 1346-1355.

Chen, N.; Roll, R. & Ross, S. A. (1986). Economic forces and the stock market. *Journal of Business*. 59, 383-403.

Cherif, M. & Gazdar, K. (2010). Macroeconomic and institutional determinants of stock market development in MENA region: New results from a panel data analysis. *International Journal of Banking and Finance*, 7, 139-159

Chkili, W., Hammoudeh, S. & Nguyen, D.K. (2014). Volatility forecasting and risk management for commodity markets in the presence of asymmetry and long memory. *Energy Economics*, 41, 1-18.

Cho, J. W., Choi, J. H., Kim, T., & Kim, W. (2016). Flight-to-quality and correlation between currency and stock returns. *Journal of Banking & Finance*, 62, 191–212.

Drake, L., Maximilian J. B. H. & Simper, R. (2006). The impact of macroeconomic and regulatory factors on bank efficiency: A non-parametric analysis of Hong Kong's banking system. *Journal of Banking and Finance*, 30, 1443-1466.

Fama, E. F. (1981). Stock returns, real activity, inflation, and money. *American Economic Review*, 71, 545-565.

Hamao, Y. (1988). Japanese Stocks, Bonds, Bills, and Inflation. *Journal of Portfolio Management*, 15, 20-26.

Jeat, Y.X & Hassan, H.H (2019). The Impact of Economic Outlook on the Stock Market of the Service Sector in Malaysia. *International Journal of Innovative Technology and Exploring Engineering,* 8, 191-200.

Khan J, Khan I (2018) The Impact of Macroeconomic Variables on Stock Prices: A Case Study of Karachi Stock Exchange. *Business Economics Journal*,9,1-8.

Nisha, N. (2015). Impact of Macroeconomic Variables on Stock Returns: Evidence from Bombay Stock Exchange (BSE). *The Journal of Investment Management*, 4, 162-170

Pilinkus, D. & Boguslauskas, V. (2009). The Short-run relationship between stock market prices and macroeconomic variables in Lithuania: an application of the impulse response function. *Economics of Engineering Decisions*, 5, 1-9.

Rafay, A.; Naz, F. & Rubab, S.(2014). Causal relationship between macroeconomic variables: evidence from developing economy. *Journal of Contemporary Issues in Business Research*,3, 88-99

Raza, S.A., Jawaid, S.T., Afshan, S.& Karim, M.Z.A. (2015). Is Stock Market Sensitive to Foreign Capital Inflows and Economic Growth? Evidence from Pakistan, *Journal of Chinese Economic and Foreign Trade Studies*, 8(3), 142-164.

Ulah, W. G.M., Alam, M.S., Islam, A., & Khan, M.K. (2017). Effect of Macroeconomic Variables on Stock Market Performance of SAARC Countries? *Asian Economic and Financial Review*, 7, 770-779.

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 499-514
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.104

The Effect of CSR, Tax Avoidance, and Information Asymmetry Issues on Corporate Reputation

Agus Arianto Toly[1], Stefanus Ronald[2], Victor Hartanto[3], Stevie Ferdinand[4]

[1] Supervisor Lecturer, Petra Christian University
[2,3,4] Student, Petra Christian University

Abstract
The purpose of this study was to determine whether corporate social responsibility has an effect on corporate reputation with information asymmetry and tax avoidance as moderating variables, for companies listed on the Stock Exchange for the period 2014-2017. In this study, using descriptive statistical data analysis techniques, classical assumption test, normality test, multicolloniearity test, heteroscedasticity test, and autocorrelation test. While hypothesis testing uses multiple linear regression, F test, and determinant coefficient test. The research sample is disclosure of corporate social responsibility through financial reports or sustainability reports in the 2014-2017 period.

Keywords: CSR, Tax Avoidance, Information Asymmetry. Corporate Reputation

Methods

A sample comprising 100 observations for the years from 2014 to 2017 for large capitalized Indonesian companies that are registered in the Indonesia Stock Exchange.

1. Introduction

Corporate Reputation is an intangible asset that is difficult to measure and explain because its reputation is not a product that can be seen. Nevertheless, the existence of a good reputation can strengthen the company's position when dealing with competitors. For consumers, it is sometimes confusing to choose a brand. Various brands provide similar benefits so that corporate reputation is the main consideration. The product is an inanimate object, while the one that gives the life of a product is a brand, so a brand is very important to be managed so that consumers will always be loyal to the product.

Prior research has demonstrated that a positive corporate reputation can lead to a number of strategic benefits, including attracting potential employees (Turban and Cable, 2003), investors (Raithel and Schwaiger, 2015), customers (Walsh, Bartikowski, and Beatty, 2014), and facilitating the ability to negotiate and contract and with other organizations (Rhee and Haunschild, 2006).

Corporate Social Responsibility (CSR) or corporate social responsibility is a concept or action taken by a company as a sense of corporate responsibility towards the social and the surrounding environment where the company is located. Corporate Social Responsibility (CSR) is an approach where companies integrate social care in their business operations and in their interactions with stakeholders based on the principles of partnership and volunteerism (Nuryana, 2005).

Fombrun (1996) defines Corporate Reputation as a representation of the company's perceptions of past actions and future prospects that describe the company as a whole attractive to all its main constituents when compared to other prominent rivals. The company's reputation can vary in a number of aspects such as the treatment of employees, product quality and safety, community involvement, and the environment. That definition also removes that view, the company's reputation may be different for various stakeholders, such as employees, consumers, investors, suppliers, and creditors. It is often assumed that corporate philanthropy can lead to a number of strategic benefits for companies by increasing the company's reputation (Szaccs et al., 2016). Regarding the link between company reputation and business benefits, empirical research has provided a wealth of evidence that shows that a company's reputation influences organizational performance. Studies have shown that a positive corporate reputation can lead to a number of strategic benefits, including attracting potential employees (Turban and Cable, 2003), investors (Raithel and Schwaiger, 2015), customers (Walsh, Bartikowski, and Beatty, 2014), and facilitating the ability to negotiate and contract and with other organizations (Rhee and Haunschild, 2006).

By carrying out CSR activities, companies will get their own benefits. Kotler and Lee (2005) state that the benefits of CSR for most companies are increasing sales and market share, strengthening brand positioning, enhancing company reputation, reducing operating costs, and increasing company attractiveness in the eyes of investors and financial analysts. In another study, Chi-Shiun Lai et al. (2010) conducted a study of CSR in small-medium business industrial buyers from Taiwan to study the effects of supplier CSR activities. The results of the study show that the positive effect of CSR is on the Company's reputation, brand equity, and brand performance, and the greatest influence of CSR is affecting the company's reputation than others. In a study of the relationship between CSR and company reputation, Marjo Elisa (2006) sees that trust seems to be the most important factor in determining a good reputation and social responsibility.

The implementation of the CSR program is an effort to harmonize the company's business strategy with sustainable programs that refer to the needs of the community. The implementation of CSR is carried out by taking into account the goals of sustainable development to meet current needs, without neglecting the rights of future generations. The CSR implementation finally aims to build and maintain public opinion to always be positive about the company. Like the statement from Frank Jeffkins (1998), corporate image (corporate image) is related to the company figure as its main goal, how to create a positive corporate image.

Tax is a compulsory contribution to the state that is owed by an individual or entity that is a force based on the Law, by not getting compensation directly and used for the state's needs for the greatest prosperity of the people. Tax serves as a source of funds for the government to finance its expenses and taxes function as a tool to regulate government policies in the social and economic fields.

Taxation in Indonesia uses a self-assessment system. Self-assessment is a taxation system that gives full trust and responsibility to taxpayers to register themselves to get an NPWP (Taxpayer Identification Number) then calculate, deposit, and self-report the tax payable. The self-assessment tax collection system means that the determination of the amount of tax owed is entrusted to the taxpayer himself and regularly reports the amount of taxes owed and paid as specified in tax laws and regulations.

Tax Avoidance is an effort to reduce, avoid, and alleviate the tax burden in various ways made possible by tax laws by taking into account the presence or absence of a result of the tax caused (Ernest R. Mortenson in Zain: 2008). Tax avoidance is done in ways that do not violate the applicable provisions, namely utilizing weaknesses contained in the tax provisions. While the tax evasion is carried out in clean ways (at illegal, that is violating taxation provisions).

In the tax provisions, there are still various loopholes that can be utilized by the company so that the amount of tax paid by the company is optimal and minimum. Optimized here means the company does not pay taxes that should not have to be paid and pay taxes with the least amount, but it is still done in a way that does not violate the applicable tax provisions.

Information asymmetry is information that is owned by one individual or party different from another party or individual (Akerlof's, 1970). The concept of information asymmetry was first expressed by George A. Akerlof's 1970 paper The Market for "Lemons": Quality Uncertainty and the Market Mechanism. In this paper, George revealed information asymmetry using illustrations of the car trade. In his basic argument, he says that buyers use standard statistical data to assess class segments of products sold. This causes buyers only to have basic knowledge while sellers have more knowledge about certain products so that sellers can sell products whose quality is below what they should. This makes investors have to minimize information asymmetry so that the decision-making for investment is not wrong and can be chosen correctly and accurately.

Earnings management is the effect of information asymmetry. Earnings management is the process of taking deliberate steps within the limits of generally accepted accounting principles both within and outside the boundaries of the General Accepted Accounting Principle (GAAP). Copeland (1968: 10) in Utami (2005) defines earnings management as "increasing ability to increase net income at will," meaning that earnings management includes management efforts to maximize or minimize profits including income smoothing, in accordance with manager's wishes. Earnings management is an intervention in the external financial reporting process with the aim of benefiting the company. Earnings management is one of the factors that can reduce the credibility of financial statements, earnings management adds bias in the financial statements and can disrupt financial statement users who believe the engineering profit figures as profit figures without engineering (Setiawati and Na'im, 2000 in Rahmawati et al. 2006).

2. Literature review amd hypotheses development

Corporate reputation is seen as a result of competitive processes in which companies signal their important characteristics to maximize social status (Spence, 1974). Assessment of cumulative values by the public from time to time provides companies with a significant competitive advantage (Fombrun and Shanley, 1990; Balmer, 1998; Fombrun and Van Riel, 1997).

Reputation can also be interpreted as a value given to individuals, institutions, or countries. Reputation cannot be obtained in a short time because it must be built for years to produce something that can be assessed by the public. Reputation also only survives if the consistency of words and deeds.

Herbig and Milewicz (1995, p.24) defines reputation as "Estimated consistency over time of an entity's attributes. This estimate is based on the willingness of the entity and the ability to perform an activity repeatedly in a similar place. Attributes are certain parts of the entity's price, quality, and marketing skills. "Fombrun (1996) defines a company's reputation as a net perception of an organization's ability to meet all stakeholder expectations. In general, the company's reputation is perceived as a strong relationship between customers and organizations, which is seen as building client relationships (Crosby et al., 1990; Hebson, 1989; Howard, 1998; Connor et al., 1997; Dollinger et al., 1997)

CSR is a broad concept, and this term is used to describe social and environmental contributions and the consequences of organizational activities (Jenkins and Yakovleva, 2006). The term "CSR" relates to disclosure of information by companies about the social and environmental impacts of economic actions on interest groups (for example: regulators, investors, etc.) in society and for the wider community (Gray et al., 1987). Corporate reporting systems that cover social and environmental issues undergo an evolutionary process, which begins with reporting employees and then moves to social reporting, environmental reporting, social responsibility reporting and finally, sustainability reporting (Buhr, 2007).

Tax avoidance is an important corporate strategy (Cai and Liu, 2009; Hanlon and Heitzman, 2010). In the traditional context, it is believed that tax avoidance represents the transfer of wealth from the government to the company and must increase the corporate reputation. However, tax avoidance is not without costs. Direct costs include implementation costs, loss of reputation and potential penalties, etc. Agency theory argues that tax avoidance activities are also related to corporate governance issues. Tax planning activities as camouflage managerial lease transfers and reduce corporate reputation (Desai and Dharmapala, 2006; Desai et al., 2007). So whether a company is involved in tax avoidance depends on whether the benefits outweigh the costs.

According to Desai et al. (2007), non-transparent tax avoidance planning activities disguise managerial deviations and reduce corporate reputation. This opinion was also supported by Desai and Dharmapala according to his research released in 2006. So whether a company decides to practice tax avoidance or not, depending on the implementation, it can be profitable or even detrimental to the company. According to Hanlon et al. (2005) and Ayers et al. (2009), tax avoidance reduces information contained in the tax burden. In general, the research conducted by Desai and Dharmapala in 2009 proved the impact of tax avoidance activities on corporate reputation, which is almost as significant. The effect of tax avoidance is positive only for companies that have been established for years, and most of the shares are owned by institutions. They prove that there are two conflicting effects on how tax avoidance affects corporate reputation. Aggressive tax avoidance activities are often related to the loss of a company's reputation on an ongoing basis.

Jogiyanto (2013: 518) states that information asymmetry is private information that is only owned by investors who have information only (informed investors). Information asymmetry can occur in the capital market when one capital market actor has more information than other market participants. The amount of information asymmetry that occurs in a traded stock can be measured using the bid ask spread. According to Scott (2000), there are two types of information asymmetry, namely adverse selection, namely that managers and other insiders usually know more about the condition and prospects of the company than outside investors. The second is a moral hazard, namely that activities carried out by a manager are not entirely known by shareholders or lenders.

Prior research conducted by Otuo Serebour Agyemang Abraham Ansong (2017) aims to examine the relationship between CSR activities and Ghana SMEs Financial Performance. This study uses the company's reputation as the dependent variable. While the independent variables are the quality of products and services, quality of staff, environmental responsibility, responsibility for the community, and quality of management. The results of the study show that corporate social responsibility has a significant positive relationship with the company's reputation. This implies that small and medium enterprises involved in CSR activities are associated with a good reputation.

Prior research conducted by Dirk Kiesewetter, Johannes Manthey, (2017) aims to answer how corporate governance and corporate social responsibility influence the relationship between value creation and tax avoidance. This study uses value creation as the dependent variable. While the independent variables are effective tax rate (ETR), company market value, and a book value of total assets. The results of the study show that the power of governance does not allow companies to create value by minimizing their tax bills. Companies with weak social and environmental characteristics indicate that a higher ETR is associated with higher value creation. The characteristics of higher corporate governance are associated with lower ETRs in a coordinated and liberal market economy.

2.1 Reputation risk management

Reputation risk management theory questions the explanatory power of theories such as institutional theory or impression management theory because they are considered too broad (Unerman, 2008). Scholars have suggested considering the complexity of the company's external and internal factors that might lead companies to report their CSR. Bebbington et al. (2008) consider that CSR reporting can be understood as a result and part of the reputation risk management process. Friedman and Miles (2001) suggest that the lens of corporate reputation "will make companies more aware of the need to manage a variety of environmental, social and ethical risks, and to show externally that they are doing it; this will increase the quantity and quality of CSR reporting "(p.528).

This study uses this theory to explain the hypotheses developed. Companies are required not only to meet the interests of shareholders, but also the interests of stakeholders. This creates social risks for the company (Kytle and Ruggie, 2005). Management's response to addressing complex social risks is through CSR. Through CSR performance, companies can minimize social risk so that they can reduce the risk of conditions that can harm the company, such as demos, strikes, and lawsuits that threaten the company's going concern. Based on the risk management perspective, Godfrey (2005) states that (1) CSR programs can produce positive moral capital between companies and stakeholders, (2) moral capital provides a type of insurance that is able to protect the company, and (3) this insurance contributes to the holder stock.

2.2 Signaling theory

According to Wolk, Signaling Theory in Thiono (2006: 4) explains the reasons why companies have an incentive to provide financial statement information to external parties because there is information asymmetry between companies and outsiders. The company (agent) knows more about the company (principal) and future prospects than outside parties (investors, creditors). Information that is lacking from outside parties regarding the company will cause them to protect themselves by providing low prices for the company. Jensen and Meckling (1976) explain that things that can happen to asymmetry can cause 2 (two) problems, namely:

a. Moral Hazard, which is a problem that arises if the agent does not implement the things agreed upon in the employment contract.
b. Adverse Selection, which is a condition where the principal cannot know whether a decision that has been taken by the agent is really based on the information that has been obtained, or an abnormality occurs in the task.

Signaling theory explains how a company should provide a signal to users of financial statements. The signal can be in the form of information about what has been done by management to realize the wishes of the owner. Signals can be in the form of promotions or other information that has stated that the company is better than other companies (jama'an, 2008)

The conclusion that can be drawn by the existence of this signaling theory is that the management of the company, especially companies that have gone public, must provide information to investors so that investors can know the state of the company and its prospects in the future. Investors can distinguish which companies have good corporate reputation before investors make the decision to invest so that in the future they can provide benefits to investors (alivia, 2013) Signaling theory explains that investment spending can provide a positive signal about the company's growth in the future, so that it can increase stock prices as an indicator of corporate reputation (Jama'an, 2008). Tax evasion practitioners for the management that have been carried out are expected to provide a positive signal to the investors who will have an impact on the increase in the corporate reputation. Basically, the corporate reputation can be said to be good, one of which is the increase in stock prices over time.

2.3 Agency Theory

According to Jensen and Meckling (1976), agency relations in agency theory as an agreement contract between the principal (principal) and the agent (agent). The principal is the party that gives the task of the principal. This contract agreement contains that the agent will perform services on behalf of the principal, which involves delegating some authority to the agent to make a decision. In its implementation, the agent may not always act the best for the principal. There is a possibility that the agent will make a decision that benefits himself. To prevent this from happening, the principal incurs costs of supervision to control the agent in taking actions that harm the principal. The agent will issue a fee, also called a security fee for the agent not to make a decision that is detrimental to the principal. In general, the supervision costs incurred by the principal cannot be the same as the bond costs incurred by the agent. The difference from these costs will be referred to as the owner's residual loss. So, agency costs are the total amount of supervision costs incurred by the principal, the security costs incurred by the agent, and the residual loss of the owner.

According to Eisenhardt (1989), agency theory is divided into two groups, namely positive agency research and principal agency research. Positive agency research emphasizes that principals and agents have human traits that are concerned with their own selves, limitations of rationality, and dislike of risk. This group only focuses on conflicts between owners and managers. Principal agency research emphasizes the relationship of principals and agents that describe the relationship between employers and workers. An example of a principal and agent relationship in a company is the relationship of shareholders and managers.

According to Raharjo (2007), the logical consequences of work contracts in increasing the efficiency of the role of information by reducing losses can be caused by problems of moral hazard and adverse selection made by principals with agents. If the principal cannot observe the agent's business directly or measure output accurately, then the agent may be able to take actions that are different from what has been agreed on in the work contract and maintain himself, for example, he will avoid the obligation to do, called moral hazard. If the principal does not have a link to the various information available to the agent at the time of decision making, he cannot know whether the business being run has been chosen properly on the basis of the agent's information or has denied his obligation, called adverse selection.

2.4 Hypothesis Development

Many of the companies only disclose financial information in their financial statements in accordance with the requirements contained in accounting standards. But for some companies that have provided information related to CSR within their company, this shows that CR is higher. This implies that the implementation of CSR this year will have a positive impact and will affect CR in the years ahead. Companies that care and implement CSR in their companies have more value than other companies that have not done CSR in their companies. Existing investors are willing to accept lower returns when the company supports social or environmental values that are in line with the expectations of investors (Khalif, Guidara & Souissi, 2015). H1 is proposed as follows:

H1: There is an influence from CSR on corporate reputation.

The shareholders want the company to have a good corporate reputation. Investors will tend to invest their capital by looking at the company's net profit that will describe the corporate reputation itself, so managers are indirectly demanded how to maximize the corporate reputation is one way to do tax avoidance (Ari Putra Permata Simarmata and Nur Cahyonowati, 2014).

Desai and Dharmapala (2009) say the traditional point of view of corporate tax avoidance shows that shareholder value should increase along with corporate tax avoidance activities, but it is different when viewed with corporate tax avoidance activities, but it is different from the manager's perspective. Companies against tax avoidance, where companies will provide different predictions. Manager's perspective on tax avoidance says tax avoidance is not always wanted by shareholders because there are costs that must be incurred in the future, such as costs incurred for tax planning, additional costs of compliance (Wang, 2010). H2 is proposed as follows:

H2: There is an influence from tax avoidance on corporate reputation.

Asymmetry information that occurs in a company because of one party, whether the manager or investor has more or better information than the other party. Thus, the parties related to the company do not have the same information about the prospects and risks of the company's future. Managers usually have more and better information than outside companies (investors), because managers within the company are more aware of the prospects and risks of the company's future. Based on signaling theory, asymmetric information will cause companies to have difficulty in finding external funding. This is caused by information asymmetry that will make creditors ask for a higher return on investment than they provide. Therefore, asymmetric information will make external financing more expensive, which in turn forces companies to hold high amounts of cash.

Companies that have high asymmetry information between managers and shareholders will give a bad signal to investors. because investors will assume that the company is experiencing agency problems and the company's future cannot be justified. So that information asymmetry that occurs in a company can make the corporate reputation decline. This is supported by Clemons's research (2014), which also states that the information gap between managers and investors can reduce corporate reputation. H3 is proposed as follows:

H3: There is an influence from information asymmetry on corporate reputation.

3. Research Method

3.1 Sample

Our sample consists of firms that were listed on the Indonesia Stock Exchanges over the period 2014-2017. We obtain a sample of 300 unique firm-year observations. Financial accounting data is obtained from Indonesia stock exchange, and CSR data are sourced from the Global Reporting Initiative.

3.2 Variables Operationalization

3.2.1 Measures of CSR

This study uses Corporate Social Responsibility as an independent variable. Corporate Social Responsibility is measured based on 91 GRI indicators. The level of CSR disclosure in the company's annual report stated in the Corporate Social Responsibility Index (CSRI) will be assessed by comparing the number of disclosures made by the company with those required by the GRI (Global Reporting Initiative). The calculation formula for broad index CSR disclosure (CSR) as follows:

$$\boxed{CSR_i = \Sigma X_{yi}/n_i}$$

where:

CSRi = Corporate Social Responsibility Index of the company i

Σ Xyi = Number of items disclosed by company i

ni = Total number of items

3.2.2 Measures of tax avoidance

Tax avoidance is a process of controlling actions to avoid the consequences of imposing taxes that are not desired but still within the framework of tax regulations. This Tobin's Q model is used to test whether tax avoidance has a positive effect on tax avoidance. The following formula is used:

$$\boxed{\text{Tobin's Q} = \alpha - \beta\, \textit{Cash}\_\text{ETR} + \varepsilon}$$

where:

Q = Corporate Reputation

Cash_ETR = Effective tax rates as a tax avoidance proxy

E = Error

3.2.3 Measures of information asymmetry

Jogiyanto (2013: 518) states that information asymmetry is private information that is only owned by investors who have information only (informed investors). Shiri and Ebrahimi (2012) suggest that information asymmetry occurs in the capital market because there is one or more market participants who are not the same in possessing and accessing information. Information Asymmetry can be measured using a bid ask spread. Bid ask spread is the difference between the highest purchase price and the lowest selling price of the traded stock. The price of a purchase request (bid price) or a bid price is a function of the costs and information it has. Bid ask spreads can be measured by the following formula:

$$\boxed{\textit{Spread}\ i,t = (\textit{Ask}\ i,t - \textit{bid}\ i,t)\ /\ ((\textit{Ask}\ i,t + \textit{bid}\ i,t)/2) \times 100}$$

where:

Ask i, t = the highest price of the company's stock i that occurs on day t

Bid i, t = lowest price of company’s stock i that occurs on day t

3.2.4 Measures of corporate reputation

Corporate Reputation is an investor's perception of the success of a company or market value, because if the company's stock price rises, the company is considered successful in carrying out its business and is able to provide satisfaction and profit to the shareholders. One indicator that can be considered by investors in assessing the success or the company as a whole is to pay attention to CR. CR is measured using the Tobin's Q. ratio. The reason for using the Tobin's Q ratio is because this ratio is not just an ordinary stock element, but also includes all elements of debt and capital in the company's shares. By involving all elements of debt and the company's share capital, the corporate reputation is more conservative than not involving all of these elements.

According to White et al. (2002) in Etty Murwaningsari (2009), Tobin's Q can be formulated as follows:

$$\boxed{Q = \frac{(EMV + D)}{(EBV + D)}}$$

where:

Q = Company Reputation

EMV = Market Value Equity / Equity Market Value (closing price x number of shares outstanding) closing price = (quarter 1 + 2 + 3 + 4) / 4

EBV = Book value of equity / Equity Book Value (difference in total company assets with total liabilities)

D = Book value of total debt.

3.2.5 Measures of size

The control variable in this study consisted of firm size. Firm size is a measurement scale used to classify the size of a company. Measurement of size is measured using natural logarithms of total assets.

SIZE = Ln (Total Assets)

3.2.6 Measures of leverage

The next control variable in this study is leverage. A ratio that describes the company’s capital structure and describes the company’s financing decisions. Leverage is proxied by the corporate reputation’s long term liabilities compared to the value of the assets of the business entity. This is in accordance with the measurements used by Lanis and Richardson (2013), which are formulated as follows

LEV = Total long-term liabilities / Total Assets

3.2.7 Measures of return on assets

The last control variable in this study is Return on Asset is the profitability ratio that shows the percentage of profit (net income) obtained by the company in relation to the overall average number of assets.

ROA = Net profit after tax / Total assets

3.3 The Model of Analysis

Data analysis techniques in this study are multiple linear regressions. Multiple linear regression analysis is used to make predictions, how changes in the value of independent variables are increased or decreased in value (manipulated).

4. Results and Discussion

4.1 Overview of Research

The research data obtained will be tested using the SPSS version 25 program. The overall sample of this study is 100. Observations which are the results of the selection of companies grouped in service companies listed on the Indonesia Stock Exchange (IDX) based on the criteria predetermined. A summary of the results of the selection of samples can be seen in table 4.1

Table 4.1 Summary of Sample Determination Results

Sample Criteria	Number of Observations
Large capitalized companies listed on the Indonesia Stock Exchange from 2014-2017	184
Companies that do not have a change in stock prices in one of the period of 2014-2017	(74)
Companies that do not issue financial statements in the rupiah currency	(12)
Companies that do not publish financial statements in one of the periods 2014-2017	(73)
Number of samples per year	25
Number of observations (25 x 4 years)	100

The following are the data needed in this study:

4.1.1 Corporate Social Responsibility (CSR)

CSR is calculated using data from the annual financial statements of service companies listed on the IDX in the 2014-2017 period. The following is an example of a CSR calculation in table 4.2:

Table 4.2 Calculation of CSR

No.	Aspek	GRI Score
1	Economic Performance	3
2	Environmental Management	2
3	Sosial:	
	a. Employment	1
	b. Human Rights Kemasyarakatan	2
	c. Community	0
	d. Product Responsibility	1
Company Total GRI Index Score		7
Total criteria in the GRI Index		91
CSRI (GRI Company Index Score = Total Criteria in the GRI Index)		0,076923

The CSRI number of 0.076923 indicates that the level of company compliance in disclosing CSR in annual reports in accordance with the GRI Index is 0.076923. The larger CSRI figures indicate the high company compliance rates in disclosing CSR in the company's annual report. A complete example of CSRI calculations can be seen in the appendix.

4.1.2 Corporate Reputation

In calculating the company's corporate reputation, the data needed are equity market value (EMV), equity book value (EBV), and a book value of total money (D). Corporate Reputation is calculated by summing EMV with D then divided by the sum between EBV and D. The following is an example of Buana Finance's Corporate Reputation calculation in 2017:

EMV = 864,042,928,350

EBV = 1,129,541,000,000

D = 120,381,000,000

Q = (864,042,928,350 + 120,381,000,000) / (1,129,541,000,000 + 120,381,000,000)

Q = 0.78759

4.1.3 Information Asymmetry

In calculating corporate information asymmetry, the data needed are earnings management, institutional ownership, managerial ownership, audit committee, auditor reputation, company size, and leverage. The following are examples of Buana Finance 2017 Information Asymmetry calculations:

Ask i, t = 895

Bid i, t = 452

Spread i, t = (895-452) / ((895 + 452) / 2) x 100 = 66

4.1.4 Tax Avoidance

To calculate Tax Avoidance, the data needed are total cash tax paid and total pretax income data. The following is an example of the calculation of Tax Avoidance Buana Finance 2017:

Total cash tax paid = 21,887

Total pretax income = 88,320

Tax Avoidance = 0.24781

Tax avoidance is proxied by the effective tax rate (Cash_ETR). Companies that carry out tax avoidance have a small effective tax rate. The results of the regression show ...

This shows that the lower the Cash_ETR of a company it will increase the corporate reputation or in other words, companies that do tax avoidance can increase the value of their company. This is in accordance with the principle of tax avoidance, namely the transfer of wealth from the government to shareholders. This result is different from Desai and Dharmapala (2005) research, which states that there is no relationship between tax avoidance and corporate reputation. This relationship only occurs in companies that have good governance.

4.2 Descriptive Statistics

Descriptive statistics were carried out on CSR, Information Asymmetry, Tax Avoidance, Corporate Reputation, and control variables. Descriptive statistics show a picture of the data studied, which contains the minimum value, maximum, mean, and standard deviation of all variables used in the study. Descriptive statistics in the study are as follows:

Table 4.2 Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Corporate_reputation	100	,15	53,82	,54834	,48338
csr	100	,00	180,00	3,48508	.34081
asimetri_informasi	100	0	180	60,9891	,50628
tax_avoidance	100	-6,11	0,9598	0,06607	,72738
Valid N (listwise)	100				

4.3 Test of Classical Assumptions

Classical assumption tests are carried out to ensure that data is feasible to use. Classic assumption tests carried out include normality test, heteroscedasticity test, and autocorrelation test. The following are the results of testing data that has been transformed

4.4 Normality Test

Table 4.4 Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Predicted Value
N		100
Normal Parameters[a,b]	Mean	,2125306
	Std. Deviation	,36144116
Most Extreme Differences	Absolute	,099
	Positive	,094
	Negative	-,099
Test Statistic		,099
Asymp. Sig. (2-tailed)		,200[c,d]

Based on the SPSS output table, it is known that the significance value of Symp. Sig (2-tailed) of 0.2 greater than 0.05. So according to the basis of decision making in the Kolmogrov-Smirnov normality test above, it can be concluded that the data is normally distributed. Thus, the requirements for normality in regression have been fulfilled

4.5 Multicolonyearity Test

To detect the presence or absence of correlation between independent variables can be seen the value of tolerance (tolerance value) and the value of VIF (Variance Inflation Factor). If the tolerance value is> 0.10 and VIF <10, then it can be interpreted that this study does not have multicollinearity. The multicollinearity test results of this study can be seen in the following table:

Table 4.5 Multicolonyearity Test

Coefficients[a]

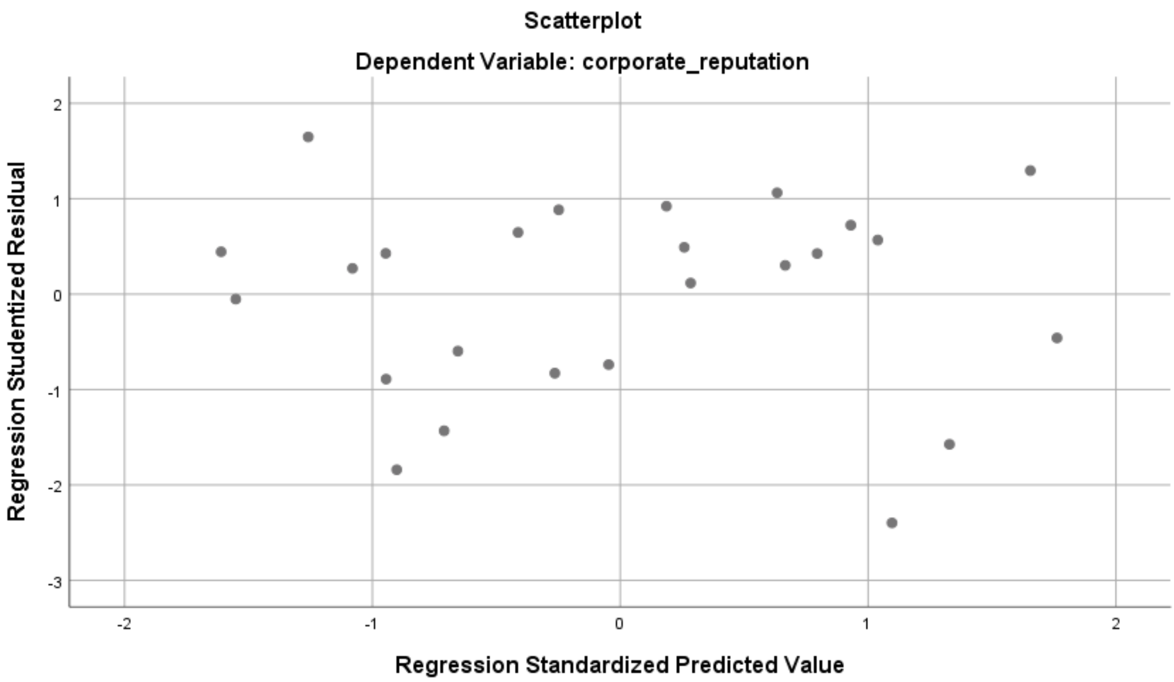
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,014	,007		2,007	,039		
	Asimetri_informasi	,772	,118	,842	6,512	,000	,756	1,322
	Tax_avoidance	,011	,115	,014	,095	,925	,575	1,740
	Csr	,060	,152	,052	,393	,699	,731	1,368

Based on the table above, it can be seen that the independent variables and control variables have tolerance values> 0.10 and VIF values <10. Then it can be concluded that in this study, there were no symptoms of multicollinearity.

4.6 Heterocedasticity test

Heterocedasticity test aims to examine whether in the regression model variance inequalities occur from residuals, one observation to another observation. If the residual variance from one observation to another observation remains, it is called homokedasticity, but if it is different, it is called heterocedasticity (Ghozali, 2013: 126). This study tested heterocedasticity using a scatterplot graph. If the spread of graphical points is spread evenly, it can be concluded that the regression model used is free from heterocedasticity. Heterocedasticity test results can be seen in the following table:

Picture 4.1 Scatterplot



Based on the results of testing in Picture 4.1, it can be seen that the point spread pattern does not form a certain pattern, the data points spread around zero, and spread evenly. This indicates that in this study, there were no symptoms of heterocedasticity.

4.7 Autocorrelation Test

Table 4.7 Auto Correlation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,857[a]	,734	,697	,20027	1,998

a. Predictors: (Constant), csr, information_asymmetry, tax_avoidance

b. Dependent Variable: corporate_reputation

In this study, autocorrelation was calculated using the Durbin Watson (DW) test. This test is conducted to test whether, in a linear regression model, there is a correlation between user error period t with period t-1 errors. The autocorrelation test results can be seen in Table 4.7, that the DW Test value is 1,998. With the DW Test value that is owned, it means that the value is between dU <dhit <4-dU or 1,736 <1,998 <2,264. The dU value is obtained from the calculation of the Durbin Watson table with a probability of 0.05 (5%). Based on these calculations, it can be concluded that this study did not occur autocorrelation.

4.8 Hypothesis Test

4.8.1 Multiple Linear Regression Tests

In this study, the analysis used is multiple linear regression analysis to determine whether or not the influence of independent variables or control variables on the dependent variable. Multiple linear regression analysis is used to obtain a regression coefficient that will determine whether the hypothesis that has been made is accepted or rejected. The analysis of this regression uses a significance level of 0.05 or 5%. The regression equation used in this study is:

$$CR = \alpha + b_1 IA + b_2 TA + b_3 CSR + e$$

Where:

α = constant

CR = corporate reputation

IA = information asymmetry

CSR = corporate social responsibility

e = error

Table 4.8 Analysis of Multiple Linear Regression

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(constant)	,014	,007		2,009	,047
	Information_asymmetry	,050	,080	,130	,618	,543
	tax_avoidance	,333	,186	,428	1,794	,047
	csr	-,093	,259	-,080	-,359	,023

a. Dependent Variable: corporate_reputation

4.8.2 Test F Statistic (f-test)

The F statistical test is intended to see whether all the independent variables and control variables in the study have a simultaneous influence on the dependent variable. If F count < F table or P value (significance value) > 0.05 then the hypothesis mentioned is rejected. If the P value is <0.05, the hypothesis is accepted. The results of the statistical test F of this study can be seen in the table

Table 4.9 Test F Statistics

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,329	6	,776	19,361	,000[b]
	Residual	,842	21	,040		
	Total	3,172	24			

a. Dependent Variable: corporate_reputation
b. Predictors: (Constant), information_asymmetry, tax_avoidance, csr

Based on table 4.9 can be seen, the significance value obtained is 0,000 smaller than 0.05. This proves that all independent variables, namely CSR, tax avoidance, and information asymmetry, jointly influence the corporate reputation.

4.8.3 Determinant Coefficient Test

The determinant coefficient (R^2) basically measures how far the model's ability to explain the variation of the dependent variable. Determination of the strength of this research model can be seen from the adjusted R^2 value presented at Table 4.9

Table 4.9 Determinant Coefficient Value

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,857[a]	,734	,697	,20027

a. Predictors: (Constant), information_asymmetry, tax_avoidance, csr
b. Dependent Variable: corporate_reputation

Based on the calculations in Table 4.9, the adjusted R^2 value is 0.734. This indicates that 73.4% of the dependent variable corporate reputation is influenced by the independent variables used, namely csr, information asymmetry, and tax avoidance, while the remaining 26.6% is explained by other factors.

4.9 Discussion

Effects of CSR on Corporate Reputation

Based on the significance test, the CSR variable has a significance value of 0.023 smaller than 0.05. This explains that CSR has a significant effect on corporate reputation, then the first hypothesis (H1) is accepted. This result is in accordance with Kotler and Lee’s (2005) research, which states that CSR affects the corporate reputation.

Effect of Tax Avoidance on Corporate Reputation

Based on the significance test, the Tax Avoidance variable has a significance value of 0.047 smaller than 0.05. This explains that Tax Avoidance has a significant effect on corporate reputation, then the second hypothesis (H2) is accepted. This result is different from Desai and Dharmapala (2005) research, which states that there is no relationship between tax avoidance and corporate reputation. This relationship only occurs in companies that have good governance.

Effect of Information Asymmetry on Corporate Reputation

Based on the significance test of information asymmetry variables measured using bid ask spread has a significance value of 0.543 greater than 0.05. This explains that information asymmetry does not significantly influence the corporate reputation, then the third hypothesis (H3) is rejected.

The results of this study are consistent with the research conducted by Shiri and Ebrahimi (2012), which states that information asymmetry does not significantly influence the corporate reputation. Asymmetry theory says that the parties related to the company do not have the same information about the prospects and risks of the company. According to Myers and Majluf (1977), there is information asymmetry between managers and outsiders: managers have more complete information about the condition of the company than outside parties. Ross (1977) developed a model where the capital structure is a signal conveyed by managers to the market. If the manager has confidence that the company's prospects are good, and because he wants the stock to increase, he wants to communicate this to investors. It can be concluded that the information gap between internal parties and outside parties also affects the corporate reputation.

5. Conclusion

This study was seen to see the effect of CSR, Tax Avoidance, and Information Asymmetry on Corporate Reputation Based on the results of the research and discussion previously described, it can be concluded that:

1. CSR partially affects the corporate reputation in service companies listed on the Indonesia Stock Exchange for the period 2014-2017. This explains that any changes that occur in the CSR variable can be used to measure the corporate reputation. Information Asymmetry, Tax Avoidance, Information Asymmetry simultaneously influences the corporate reputation in service companies registered in the 2014-2017 period. This shows that the company's reputation can be predicted by all independent variables in this study because most of it affects the corporate reputation.

2. Tax Avoidance partially affects the corporate reputation in service companies listed on the Indonesia Stock Exchange for the period 2014-2017. This explains that any changes that occur in the Tax Avoidance variable can be used to measure the corporate reputation.

3. Information asymmetry partially does not affect the corporate reputation of service companies listed on the Indonesia Stock Exchange for the period 2014-2017. This explains that any changes that occur in the information asymmetry variable cannot be used to measure corporate reputation.

6. Acknowledgement

On this occasion, we would like to express our gratitude to Mr. Agus Ariyanto Toly as our lecturer who helped in making this research. In addition, we also want to thanks our university for giving the opportunity to provide facilities in this research process.

References

Fisher, J.M. (2014), "Fairer shores: tax havens, tax avoidance, and corporate social responsibility," Boston University Law Review, Vol. 94 No. 1, pp. 337-365.
Gramlich, D., and Finster, N. (2013), "Corporate sustainability and risk," Journal of Business Economics, Vol. 83 No. 6, pp. 631-664.
Hanlon, M. and Heitzman, S. (2010), "A review of tax research," Journal of Accounting and Economics, Vol. 50 Nos 2/3, pp. 127-178.
Cahan, S.F. et al. (2015), "Are CSR disclosures value relevant? Cross-country evidence,", European Accounting Review, Vol. 25 No. 3, pp. 579-611.

Chatterji, A.K., Durand, R., Levine, D.I. and Touboul, S. (2016), “Do ratings of firms converge? Implications for managers, investors and strategy researchers”, Strategic Management Journal, Vol. 37 No. 8, pp. 1597-1614.
Hanlon, M. and Slemrod, J. (2009), “What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement”, Journal of Public Economics, Vol. 93 Nos 1/2, pp. 126-141.
Donaldson, T. and Preston, L.E. (1995), "The stakeholder theory of the corporation: concepts, evidence, and implications," Academy of Management Review, Vol. 20No. 1, pp. 65-91.
Eberl, M. and Schwaiger, M. (2005), "Corporate reputation: disentangling the effects on financial performance," European Journal of Marketing, Vol. 39 Nos 7/8, pp. 838-854.
Eckert, C. (2017), "Corporate reputation and reputation risk," Journal of Risk Finance, Emerald Group Publishing Limited, Vol. 18 No. 2, pp. 145-158.
Flanagan, D.J., O’Shaughnessy, K.C. and Palmer, T.B. (2011), “Re-assessing the relationship between the fortune reputation data and financial performance: overwhelming influence or just a part of the puzzle?”, Corporate Reputation Review, Vol. 14 No. 1, pp. 3-14.
Lázaro Rodriguez-Ariza, Jennifer Martínez-Ferrero, Manuel Bermejo-Sánchez, (2016) "Consequences of earnings management for corporate reputation: Evidence from family firms," Accounting Research Journal, Vol. 29 Issue: 4, pp.457-474, https://doi.org/10.1108/ARJ-02-2015-0017
Otuo Serebour Agyemang Abraham Ansong, (2017)," Corporate social responsibility and firm performance of Ghanaian SMEs: Mediating role of access to capital and firm reputation," Journal of Global Responsibility, Vol. 8 Iss 1 pp. http://dx.doi.org/10.1108/JGR-03-2016-0007
Duuren, E., Plantinga, A. and Scholtens, B. (2015), "ESG integration and the investment management process: fundamental investing reinvented," Journal of Business Ethics, Vol. 138 No. 3, pp. 525-533, available at: https://doi.org/10.1007/s10551-015-2610-8

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 515-530
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.105

Employable Skills for Hospitality Graduates as Perceived Among Hotel Supervisors in Cebu City

Simplicio R. Espellita Jr[1], Vicente S. Maravilla Jr[2]

[1] School of Business and Economics, University of San Carlos, Cebu City Philippines.

Correspondence: Simplicio R. Espellita Jr, School of Business and Economics, University of San Carlos, Cebu City Philippines 6000, Email Address: srespellita@usc.edu.ph

Abstract
Hospitality is one of the most significant components of the tourism industry. Graduates of hospitality management in the twenty-first century are facing an increasingly competitive and unstable employment market; thus, it is critical that they should be equipped with skills that enable them to maximize their full potential. According to Mcnair (2003), in the future, graduates will need to have greater ownership of their employable skills as well as the confidence to cope with economic upheavals in order to capitalize on career opportunities. Employable skills are those that prepare students specifically for the world of work. In common terms, they cover a range of competencies within the categories of hospitality operations skills, human resource skills, personal skills, and conceptual skills. This study relates to employers perceived of Hotel and Restaurant Management graduate skills as deemed required by need for accelerated performance levels in hospitality the businesses for fast change in the skills required of university graduates and to understand what industry needs from education and have education is accomplishing its objectives to prepare qualified graduate for the changing hospitality industry in the Philippines and it aims to determine the factor that measures the employable skills of the hotel. In the context of the findings of the study, the author concluded that the most employable skills as perceived among hotel supervisors in three departments, namely: Housekeeping Department, Front Office Department, and Food and Beverage Department were Front Office Operational Ability, Leadership skills, Communication skills, Cooperative team building, Critical thinking ability, Hands-on experience, and Strategic planning were the seven employable skills possessing a most or significant need for hotel supervisors. However, Restaurant Operational Management, Handling difficult people, Problem-solving and identification and interrelationship possess moderately crucial than their ability to perform the skills while Lodging Administration, Negotiating Skills, Computer Application and Finance and Accounting. Interestingly all four of the lowest rated employable skills in the hospitality industry are cornerstones taught, and it should still be retained because of its essential ratings among hotel supervisors.

Keywords: Employable skills, Tourism, Hospitality Industry

1. Introduction

1.1 Rationale of the Study

In this context, hospitality management education may have a uniquely valuable role to play. A recent survey by the Hotel, Restaurant, and Resort Association of Cebu (HRRAC) revealed that employers recruiting graduates placed an unusually high value on Human Resource Skills (i.e. leadership skills, communication skills, Cooperative team building, negotiating skills, harmonious guest relations, handling difficult people, employee relations and public relations skills. In new workplace skills such as People skills that include critical thinking ability skills, problem- solving and identification skills, decision-making skills, computer application skills, multilingual skills, research skills, professionalism, and hands-on experience. The majority of employers in the study valued analytical thinking and problem-solving skills just as much, if not more so than subject knowledge. The generation of new ideas help drive innovation within the organization, a sense of maturity and the demonstration of leadership were also high on the list of employable skills sought out by employers.

On the other hand tourism industry is not just about the facilities and attractions provided for visitors. It is about people and especially about the relationship between the customer and the individual providing service. Everybody employed in the tourism industry needs to have the knowledge, skills, attitudes, and values to provide the standard of product and services that a customer expect. Knowing about the tourism industry, it's component parts and especially where you fit in is an important starting point to a successful career in tourism.

According to (Sommerville, 2007), the hospitality industry is a people industry. But for once let us not focus on the people who are our guest and customers but on those people who are serving our guests and customers, those who work in the hospitality operation are the company's most valuable asset, more valuable than the equipment. When management takes care of its employees, the employees will certainly be more motivated to take care of the guest and customers.

Our workforces are our greatest strength and our competitive advantage. The involvement of an employee is one of the elements of the success of the hospitality industry. The responsibilities of hotel supervisors in the hospitality industry are continuously changing. Obtaining and keeping a management job in a Food and Beverage Department, Housekeeping Department and Front Office Department or hotel require that a person have the ability to change. Successful managers have the enthusiasm to respond to the changing needs and challenges of their organization (Woods & King, 2002). Some of these challenges are due to the changes affecting the hospitality industry today. Consequently, the curriculum and the methods used to prepare entry-level managers in this field should also be designed to fit the demands of today's industry.

1.2 Theoretical Framework

This study is premised on Bandura's Social Cognitive Theory. Bandura (1986) advanced a view of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change. People are viewed as self-organizing, proactive, self-reflecting, and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses. From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences. For example, how people interpret the results of their own behavior informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behavior. This is the foundation of Bandura's (1986) conception of *reciprocal determinism*, the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in *triadic reciprocity*. Bandura altered the label of his theory from social learning to social "cognitive" both to distance it from prevalent social learning theories of the day and to emphasize that cognition plays a critical role in people's capability to construct reality, self-regulate, encode information, and perform behaviors.

The reciprocal nature of the determinants of human functioning in social cognitive theory makes it possible for therapeutic and counseling efforts to be directed at personal, environmental, or behavioral factors. Strategies for increasing well-being can be aimed at improving emotional, cognitive, or motivational processes, increasing behavioral competencies, or altering the social conditions under which people live and work. In school, for example, teachers have the challenge of improving the academic learning and confidence of the students in their charge. Using social cognitive theory as a framework, teachers can work to improve their students' emotional states and to correct their faulty self-beliefs and habits of thinking (personal factors), improve their academic skills and self-regulatory practices (behavior), and alter the school and classroom structures that may work to undermine student success (environmental factors).

Social cognitive theory is rooted in the view of human agency in which individuals are agents proactively engaged in their own development and can make things happen by their actions. Key to this sense of agency is the fact that, among other personal factors, individuals possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions, that "what people think, believe, and feel affects how they behave" (Bandura, 1986). Bandura provided a view of human behavior in which the beliefs that people have about themselves are critical elements in the exercise of control and personal agency. Thus, individuals are viewed both as products and as producers of their own environments and of their social systems. Because human lives are not lived in isolation, Bandura expanded the conception of human agency to include collective agency. People work together on shared beliefs about their capabilities and common aspirations to better their lives. This conceptual extension makes the theory applicable to human adaptation and change in collectivistic ally-oriented societies as well as individualistically- oriented ones.

Environments and social systems influence human behavior through psychological mechanisms of the self-system. Hence, the social cognitive theory posits that factors such as economic conditions, socioeconomic status, and educational and familial structures do not affect human behavior directly. Instead, they affect it to the degree that they influence people's aspirations, self-efficacy beliefs, personal standards, emotional states, and other self-regulatory influences. In all, this social cognitive view of human and collective functioning, which marked a departure from the prevalent behaviorist and learning theories of the day, was to have a profound influence on psychological thinking and theorizing during the last two decades of the twentieth century and into the new millennium.

1.3 Objective of the study

This study relates to employers perceived of graduate skills as deemed required by need for accelerated performance levels in hospitality businesses for rapid change in the skills required of university graduates and to understand what industry needs from education and have education is accomplishing its objectives to prepare qualified graduate for the changing hospitality industry in the Philippines and it aims to determine the factor that measures the employable skills of the hotel supervisors.

2. Materials and Methods

2.1 Research Design

This study made use of the descriptive method using the survey method. The descriptive study is deemed to be appropriate for this research paper since it will seek and collect information without changing anything from the environment. This particular descriptive study will involve one - time interaction with a group of people through the use of the survey method aided by the questionnaire and in this case the hotel supervisors in **Cebu City** to collect the necessary data or information relative to the main variable for this study. According to (Rog. 1998) the descriptive studies can answer the question such as “what is” or “what was” hence the appropriateness of the aforementioned method.

2.2 Research Site

This study has been conducted in Selected Hotel in Cebu City, Philippines.

2.3 Participants

This study made use of the convenient purposive - sampling technique. The purposive sampling is the most appropriate method in determining the respondent for this research since it will make use of the researchers' knowledge that will be used in order to explain the phenomenon under investigation, Hence only the hotel supervisors in Cebu City will be considered for this study. Convenient is non-probability techniques since the researcher will make use of any subject as long as they are hotel supervisors in Cebu City in accordance with their availability and accessibility for this study. Table 1 shows the respondent, hotel name, department, and position.

2.4 Instruments

The study made use of a validated instrument to measure the employable skills in the hotel industry as per the assessment made by the hotel supervisors. The said instrument is made up of two parts: the demographic profile such as age, gender, civil status, work position, highest educational attainment and number of years working in the current position, is contained in Part 1 while the required employable skills has four dimensions such as hospitality operations, human resource skills, personal skills, and conceptual skills is contained in part 2.

2.4 Data Collection and Analysis

2.4.1 Phase I. Initial

The researcher wrote a letter to the Human Resource Department of the selected hotels in Cebu City to ask permission to conduct research. When approval is given, the researcher will approach the different department of the hotels and distribute the instrument to them.

2.4.2 Phase II. Actual gathering

The second phase was given to the respondents three days to answer the questionnaire and provide them with the mobile number in case any classification to the study can be made by them.

2.4.3 Phase III. Post gathering

The researcher went back to the hotels in Cebu City and retrieved the instrument from the respondents. When the retrieval of data is done, the appropriate statistical treatment will be conducted so that prospect inferences on the correlation will be established. In treating the data, composite mean was used in the study.

3. Results and Discussions

3.1 Required competencies as perceived by the Supervisors in the Hotel Industry.

3.1.1. On the employable skills in the hotel industry, as perceived by the respondents in Food and Beverage Department, the researcher wanted to find out the employable skills in the context of Hospitality Operations skills working in the hospitality industry.

Table 1 On the employable skills in the hotel industry as perceived by the respondents in Food and Beverage Department, the researcher wanted to find out the employable skills in the context of Hospitality Operations skills working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
A. Hospitality Operations								
1. Lodging Administration	0	3	8	8	19	3.26	GI	7
2. Restaurant Operational Management	0	0	6	13	19	3.68	GI	1
3. Food and Beverage Management	0	1	6	12	19	3.58	GI	2
4. Hospitality Facility Planning and Development	0	1	7	11	19	3.53	GI	3
5. Hospitality Finance and Accounting	0	3	7	9	19	3.32	GI	6
6. Marketing in Hospitality Industry	0	3	6	10	19	3.37	GI	5
7. Front Office Operational Ability	0	1	8	10	19	3.47	GI	4
Composite Mean						**3.46**	**GI**	

Table 1 shows that the most employable skills in Food and Beverage Management as perceived by the hotel respondents in Hospitality Operations Skills with the composite mean of 3.46 with an interpretation of hugely important. Restaurant operational management was generated a weighted mean of 3.68 with an interpretation of greatly important; Food and Beverage Management reached a weighted mean of 3.58 with an interpretation of exceedingly important; Hospitality Planning and Development was garnered a weighted mean of 3.53 with an interpretation of much important. The finding shows that Restaurant Operations can be classified as the back of the house operations; working behind the scenes of the establishment or front of the house is in direct contact with customers, either face to face or over the telephone. Restaurant Operations Skills has a vital role to play in delivering products and services. In order for any establishment to be successful, each of the section needs to work together towards a common goal. Restaurant Operations offer foods and drinks to customers, and this department is often divided into smaller units such as bar, restaurants, room service and banquet and function catering.

Legend:

1:00 – 1.74	*NI*	*Not important*
1.75 – 2.49	*SI*	*Slightly important*
2.50 – 3.24	*MI*	*Moderately Important*
3.25 – 4.00	*GI*	*Greatly Important*

3.1.2 On the employable skills in the hotel industry as perceived by the respondents in Food and Beverage Department the researcher wanted to find out the employable skills of respondents in the context of Human Resource Skills working in the hospitality industry.

Table 2 On the employable skills in the hotel industry as perceived by the respondents in Food and Beverage Department the researcher wanted to find out the employable skills of respondents in the context of Human Resource Skills working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
B. Human Resource Skills								
1. Leadership Skills	0	0	6	13	19	3.68	GI	2
2. Communication Skills	0	0	6	13	19	3.68	GI	2
3. Cooperative Team Building	0	1	4	14	19	3.68	GI	2
4. Negotiating Skills	0	2	9	8	19	3.32	GI	8
5. Harmonious Guests Relations	0	3	5	11	19	3.42	GI	5.5
6. Handling Difficult People	0	2	6	11	19	3.47	GI	4
7. Employee Relations	0	3	6	10	19	3.37	GI	7
8. Public Relations Skills	0	2	7	10	19	3.42	GI	5.5
Composite Mean						**3.51**	**GI**	

Table 2 shows that the most employable skills as perceived by the respondents under Human Resource Skills in the hospitality industry with the composite mean of 3.51 with an interpretation of exceedingly important; leadership skills, communication skills, and cooperative team building skills were generated a weighted mean of 3.68 with an interpretation of much important. The finding shows that leadership skills, communications, and cooperative team building were needed to negotiate and provide service to clients while communication skills are associated with listening, presenting, verbalizing and non - verbal communication therefore, the food and beverage department were responsible for tasks such as preparing for service, greeting and seating customers, promoting food and beverage sales, taking orders, serving food and drinks, collecting guest payment of accounts and maintaining service areas while for food production is responsible for the cooking and presentation of food for guests. Tasks may include ordering bulk food, cooking, and presenting the menu items, budgeting, operations of all kitchen equipment, and maintaining of the marketplace for customers taste and food trends.

3.1.3. On the employable skills in the hotel industry, as perceived by the respondents in the Food and Beverage Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

Table 3 On the employable skills in the hotel industry as perceived by the respondents in the Food and Beverage Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
C. Personal Skills								
1. Critical Thinking Ability	0	2	5	12	19	3.53	GI	3
2. Problem Solving and Identification	0	2	3	14	19	3.63	GI	1.5
3. Decision Making Skills	0	1	9	9	19	3.42	GI	4
4. Computer Application	0	3	14	2	19	2.95	MI	7.5
5. Multilingual Skills/Need of second language	0	5	10	4	19	2.95	MI	7.5
6. Research Skills	0	5	8	6	19	3.05	MI	6
7. Professionalism	0	2	8	9	19	3.37	GI	5
8. Hands on Experience	0	1	5	13	19	3.63	GI	1.5
Composite Mean						**3.32**	**GI**	

Table 3 shows that the most employable skill as perceived by the respondents under Personal Skills with the composite mean of 3.32 with an interpretation of greatly important. Problem-solving and identification and hand – on experience culled a weighted mean of 3.63 with an interpretation of greatly important; Critical thinking ability was generated weighted mean of 3.53 with an interpretation of greatly important; Research skills were obtained a weighted mean of 3.07 with an interpretation of moderately important; Computer application skills and

Multilingual skills were procured a weighted mean 2.95 with an interpretation of moderately important. The finding shows that Hospitality establishment is closely interrelated and need to work together to achieve their common goals without the cooperation there would be little or no success. Personal attributes and work ethics of employees within the hospitality industry are important and different roles in the hospitality emphasize different sets of skills. Personal attributes required by all hospitality staff like the attention to detail or work performance, integrity/work ethics/ethical behavior, awareness of confidential issues, and work.

3.1.4. On the employable skills in the hotel industry, as perceived by the respondents in the Food and Beverage Department, the researcher wanted to find out the conceptual skills of respondents working in the hospitality industry

Table 4. On the employable skills in the hotel industry, as perceived by the respondents in the Food and Beverage Department, the researcher wanted to find out the conceptual skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
D. Conceptual Skills								
1. Organizational Structure and Policies	0	2	10	7	19	3.26	GI	3.5
2. Hospitality Laws and Regulations	0	5	7	7	19	3.11	MI	5
3. Principles of Marketing	0	4	13	2	19	2.89	MI	7
4. Finance and Accounting	0	4	10	5	19	3.05	MI	6
5. Human Resource Management	0	2	10	7	19	3.26	GI	3.5
6. Interrelationships	0	0	13	6	19	3.32	GI	2
7. Strategic Planning	0	0	12	7	19	3.37	GI	1
Composite Mean						**3.18**	**MI**	

Table 4 shows that the most employable skills as previewed by the respondents in the Conceptual Skills with the composite mean of 3.37 with an interpretation of moderately important. Strategic planning was captured a weighted mean of 3.37 with an interpretation of greatly important; Interrelationships skills acquired a weighted mean of 3.32 with an interpretation of greatly important. While organization structure and policies and human resource management skills were garnered a weighted mean of 3.26 with an interpretation of greatly important. The findings show that strategic plannings are the planning and visioning skills needed by supervisors. Therefore the hospitality industry offers a variety of job opportunities and career pathways. Career moves in the hospitality industry can be horizontal as well as vertical.

On tables, 5 to table 8 revealed the most employable skills in the hotel industry as perceived by the respondents in the Front Office Department.

3.2.5 On the employable skills in the hotel industry as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Hospitality Operations of respondents working in the hospitality industry.

Table 5. On the employable skills in the hotel industry, as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Hospitality Operations of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
A. Hospitality Operations								
1. Lodging Administration	0	3	6	12	21	3.43	GI	6
2. Restaurant Operational Management	0	1	8	12	21	3.52	GI	4
3. Food and Beverage Management	0	2	5	14	21	3.57	GI	2
4. Hospitality Facility Planning and Development	0	2	6	13	21	3.52	GI	4
5. Hospitality Finance and Accounting	0	2	9	10	21	3.38	GI	7
6. Marketing in Hospitality Industry	0	1	8	12	21	3.52	GI	4
7. Front Office Operational Ability	0	1	3	17	21	3.76	GI	1
Composite Mean						**3.53**	**GI**	

Table 5 shows that the most employable skills in the hotel industry as perceived by the respondents Hospitality Operations was generated a composite mean of 3.53 with an interpretation of greatly important; Front office operational ability was reached a weighted mean of 3.76 with an interpretation of greatly important; Food and beverage management was generated a weighted mean of 3.57 with an interpretation of greatly important. While Restaurant Operational Management and Marketing in the Hospitality Industry were procured a weighted mean of 3.52 with an interpretation of greatly important, the finding shows that if you were assigned in the front office department, the staff should know basic knowledge, skills and the standard operating procedure in the hospitality operations.

3.1.6. On the employable skills in the hotel industry, as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry.

Table 6. On the employable skills in the hotel industry as perceived by the respondents in the Front Office Department the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry

SKILLS	1	2	3	4	N	WM	DV	R
B. Human Resource Skills								
1. Leadership skills	0	0	4	17	21	3.81	GI	3.5
2. Communication skills	0	1	3	17	21	3.76	GI	6
3. Cooperative team building	0	1	2	18	21	3.81	GI	3.5
4. Negotiating skills	0	0	4	17	21	3.81	GI	3.5
5. Harmonious guest relations	0	0	4	17	21	3.81	GI	3.5
6. Handling difficult people	0	0	3	18	21	3.86	GI	1
7. Employee relations	0	1	7	13	21	3.57	GI	8
8. Public Relations skills	0	1	4	16	21	3.71	GI	7
Composite Mean						**3.77**	**GI**	

Table 6 shows that the most employable skills in the hotel industry as perceived by the respondents in Human Resource Skills were incurred a composite mean of 3.77 with an interpretation of greatly important. Handling difficult people was generated a weighted mean of 3.86 with an interpretation of greatly important; while leadership skills, cooperative team building; negotiating skills and harmonious guest relations were copped a weighted mean of 3.81 with an interpretation of greatly important. The finding shows that the Front Office is involved in the operation of the accommodation services as well as the reservations and reception areas. Staff in this department is involved in talking and recording and delivering quality products and services to the guests, so inner work standards equated to having high standards of work performance to satisfy the guest needs and expectation and are able to manage a group of difficult people or interact in a one – on – one format.

3.1.7. On the employable skills in the hotel industry, as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

Table 7. On the employable skills in the hotel industry, as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
C. Personal Skills								
1. Critical thinking Ability	0	0	1	20	21	3.95	GI	1
2. Problem Solving and identification	0	0	3	18	21	3.86	GI	3.5
3. Decision making skills	0	1	0	20	21	3.90	GI	2
4. Computer application	0	1	9	11	21	3.48	GI	6
5. Multilingual skills/need second language	0	3	9	9	21	3.29	GI	8
6. Research skills	0	1	10	10	21	3.43	GI	7
7. Professionalism	0	0	4	17	21	3.81	GI	5
8. Hands – on experience	0	1	1	19	21	3.86	GI	3.5
Composite Mean						**3.70**	**GI**	

Table 7 shows that the most employable skills in the hotel industry as perceived by the respondents in Personal skills with the composite mean of 3.70 with the interpretation of greatly important. Critical thinking ability was garnered a weighted mean of 3.95 with an interpretation of greatly important; Decision-Making skills was generated a weighted mean of 3.90 with the interpretation of greatly important; while problem-solving and identification skills were obtained a weighted mean of 3.86 with an interpretation as greatly important. The finding shows that if you were assigned to the front office department, the staff should be careful in judging about the good and bad hotel operations.

3.1.8. On the employable skills in the hotel industry, as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

Table 8 On the employable skills in the hotel industry as perceived by the respondents in the Front Office Department, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
D. Conceptual Skills								
1. Organizational Structure and policies	0	1	8	12	21	3.52	GI	4
2. Hospitality law and regulations	0	1	5	15	21	3.67	GI	1
3. Principle of marketing	0	1	9	11	21	3.48	GI	5
4. Finance and Accounting	0	2	10	9	21	3.33	GI	7
5. Human Resource Management	0	1	10	10	21	3.43	GI	6
6. Interrelationships	0	2	5	14	21	3.57	GI	3
7. Strategic Planning	0	2	4	15	21	3.62	GI	2
Composite Mean						**3.52**	**GI**	

Table 8 shows that the most employable skills in the hotel industry as perceived by the respondents in the Conceptual skills with a composite mean of 3.42 with an interpretation as greatly important. Hospitality Law and Regulations has generated a weighted mean of 3.67 with an interpretation as greatly important; Strategic Planning was garnered a weighted mean of 3.62 with an interpretation as greatly important; Interrelationships was secured a weighted mean of 3.57 with an interpretation as greatly important. The finding shows that if you were in the front office, the staff should know the basic knowledge about laws and regulation in order to know the dos and don'ts of the hospitality operations in terms of policies and procedures.

On tables, 9 to table 11 revealed the most employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department.

3.1.9. On the employable skills in the hotel industry, as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Hospitality Operations Skills of respondents working in the hospitality industry.

Table 9 On the employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Hospitality Operations Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
A. Hospitality Operations								
1. Lodging Administration	0	1	7	12	20	3.55	GI	6
2. Restaurant Operational Management	0	1	8	11	20	3.50	GI	7
3. Food and Beverage Management	0	1	5	14	20	3.65	GI	3.5
4. Hospitality Facility Planning and Development	0	0	3	17	20	3.85	GI	1
5. Hospitality Finance and Accounting	0	1	6	13	20	3.60	GI	5
6. Marketing in Hospitality Industry	0	0	7	13	20	3.65	GI	3.5
7. Front Office Operational Ability	0	2	2	16	20	3.70	GI	2
Composite Mean						**3.64**	**GI**	

Table 9 shows that the most employable skills in the hotel industry as perceived by the respondents in Hospitality Operations were culled a composite mean of 3.64 with an interpretation as greatly important. Hospitality Facility Planning and Development has garnered a weighted mean of 3.85 with an interpretation as greatly important while Marketing in Hospitality Industry and Food and Beverage Management were captured a weighted mean of 3.65 with an interpretation as greatly important. The finding shows that if you were in the Housekeeping Department, the staff tasks in the various jobs were necessary for efficient and quality housekeeping and must see to it that such tasks were properly distributed. If there were plenty of guests to be served or the area to be maintained were quite large as in the case of big hotels, a rigid division of labor and specialization may be necessary this means that one position shall concentrate on a specific type of work.

3.1.10. On the employable skills in the hotel industry, as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry.

Table 10 On the employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
B. Human Resource Skills								
1. Leadership skills	0	0	2	18	20	3.90	GI	4
2. Communication skills	0	0	1	19	20	3.95	GI	1.5
3. Cooperative team building	0	0	2	18	20	3.90	GI	4
4. Negotiating skills	0	1	4	15	20	3.70	GI	8
5. Harmonious guest relations	0	0	2	18	20	3.90	GI	4
6. Handling Difficult People	0	0	1	19	20	3.95	GI	1.5
7. Employee Relations	0	0	3	17	20	3.85	GI	6.5
8. Public Relations skills	0	0	3	17	20	3.85	GI	6.5
Composite Mean						**3.88**	**GI**	

Table 10 shows that the most employable skills in the hotel industry as perceived by the respondent's Human Resource skills was generated a composite mean of 3.88 with an interpretation as greatly important. Communication skills and Handling difficult people have garnered a weighted mean of 3.95 respectively with an interpretation as greatly important; Leadership skills, Cooperative skills and handling difficult people were captured a weighted mean of 3.90 with an interpretation of greatly important. The finding shows that good management starts with proper communication. When a housekeeping supervisor has established his direction through his goals, plan, and operational procedures, he is better equipped to supervise the operation efficiently. But he must consistently and effectively lead, direct and monitor the implementation of the standard operating procedures to be able to generate the expected result's and to avoid guest complain and take corrective action or adopt some remedial measures to bridge any performance gap in handling difficult people.

3.1.11. On the employable skills in the hotel industry, as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

Table 11 On the employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
C. Personal Skills								
1. Critical thinking ability	0	0	1	19	20	3.95	GI	1.5
2. Problem solving and identification	0	0	2	18	20	3.90	GI	3
3. Decision making skills	0	1	1	18	20	3.85	GI	4
4. Computer application	1	1	6	12	20	3.45	GI	8
5. Multilingual skills/need of second language	0	1	8	11	20	3.50	GI	7
6. Research skills	0	0	5	15	20	3.75	GI	6
7. Professionalism	0	1	2	17	20	3.80	GI	5
8. Hands – on – experience	0	0	1	19	20	3.95	GI	1.5
Composite Mean						**3.77**	**GI**	

Table 11 shows that the most employable skills in the hotel industry as perceived by the respondents in Personal skills were generated a composite mean of 3.77 with an interpretation as greatly important. Critical thinking ability and Hands – on – experience were reached 3.95 respectively, an interpretation as greatly important; Problem-solving and identification were reached to 3.95 with an interpretation as greatly important. The finding shows that it was the responsibility of the housekeeping supervisors to see to it that all housekeeping operations should meet productivity standards based on a given productivity ratio. One of the most important purposes of the housekeeping department was guest satisfaction is its primary objective.

3.1.12 On the employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

Table 12. On the employable skills in the hotel industry, as perceived by the respondents in the Housekeeping Department, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
D. Conceptual Skills								
1. Organizational Structure and policies	0	0	7	13	20	3.65	GI	5
2. Hospitality law and regulations	0	0	6	14	20	3.70	GI	3
3. Principles of marketing	0	2	4	14	20	3.60	GI	6
4. Finance and Accounting	0	2	6	12	20	3.50	GI	7
5. Human Resource Management	0	2	2	16	20	3.70	GI	3
6. Interrelationships	0	1	3	16	20	3.75	GI	2
7. Strategic Planning	0	1	2	17	20	3.80	GI	1
Composite Mean						**3.67**	**GI**	

Table 12 shows that the most employable skills in the hotel industry as perceived by the respondents in Housekeeping Department under Conceptual Skills was Strategic planning with an average 3.80 and was greatly important and the composite mean of 3.67%. The finding shows that since the beginning, it has always been understood that the primary function of the housekeeping department is the cleaning of guestrooms and public areas purely maintenance work. To sustain an operation that will be able to deliver and at times even surpass guests expectations, a framework must be developed as a guidepost for improvement to constitutes the objectives of the department that everyone from the top to the least of the rank and file should work towards the department goal.

On table 13 to table 16 revealed the most employable skills in the hotel industry as perceived by the respondents in Three Departments.

3.1.13 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Hospitality Operations Skills of respondents working in the hospitality industry.

Table 13 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Hospitality Operations Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
A. Hospitality Operations								
1. Lodging Administration	0	7	21	32	60	3.42	GI	7
2. Restaurant Operational Management	0	2	22	36	60	3.57	GI	4
3. Food and Beverage Management	0	4	16	40	60	3.60	GI	3
4. Hospitality Facility Planning and Development	0	3	16	41	60	3.63	GI	2
5. Hospitality Finance and Accounting	0	6	22	32	60	3.43	GI	6
6. Marketing in Hospitality Industry	0	4	21	35	60	3.52	GI	5
7. Front Office Operational Ability	0	4	13	43	60	3.65	GI	1
Composite Mean						**3.55**	**GI**	

Table 13 reveals that the most employable skills in the hotel industry as perceived by the respondents in three departments in the context of Hospitality Operation were garnered a composite mean of 3.55 with an interpretation as greatly important. Front Office Operational Ability Skills was reached to the weighted mean of 3.65 with an interpretation as greatly important; Hospitality Facility Planning and Development was garnered a weighted mean of 3.61 with the interpretation as greatly important; While Food and Beverage Management was obtained a weighted mean of 3.60 with the interpretation as greatly important. The finding shows that each department in the enterprise was expected to carry out its own specialized functions. The important part of the whole operation and must coordinate its activities with other department was the front office. Front office department was the heart of the hotel operation because this department has special responsibilities that create a more direct association with and it has a close working relationship such as engineering, Food and beverage, housekeeping, laundry, purchasing and among other departments of the hotel.

3.1.14 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry.

Table 14 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Human Resource Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
B. Human Resource Skills								
1. Leadership skills	0	0	12	48	60	3.80	GI	2
2. Communication skills	0	1	10	49	60	3.80	GI	2
3. Cooperative team building	0	2	8	50	60	3.80	GI	2
4. Negotiating skills	0	3	17	40	60	3.62	GI	7
5. Harmonious guest relations	0	3	11	46	60	3.72	GI	5
6. Handling difficult people	0	2	10	48	60	3.77	GI	4
7. Employee Relations	0	4	16	40	60	3.60	GI	8
8. Public Relations Skills	0	3	14	43	60	3.67	GI	6
Composite Mean						**3.72**	**GI**	

Table 14 reveals that the most employable skills in the hotel industry as perceived by the respondents in three Departments in the context of Human Resource skills was culled of a composite mean of 3.72 with an interpretation as greatly important. Leadership skills, Communication skills, and Cooperative team building were garnered a 3.80 with an interpretation as greatly important; while handling difficult people was garnered a weighted mean of 3.77 with an interpretation as greatly important. The finding shows that a good supervisor starts with proper training and self- disciplined. Leadership, by example, is a key principle advocated by every responsible supervisor. As much as possible, he does not give employees a negative impression of his character, values, and work ethic. Whatever employees see and observed in him will be followed, imitated, and even magnified. A key ingredient to order and productivity were communication and cooperative team building among employees to motivate at all levels through his words of encouragement and gentle demeanor.

3.1.15 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

Table 15 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Personal Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
C. Personal Skills								
1. Critical thinking ability	0	2	7	51	60	3.82	GI	1.5
2. Problem solving and identification	0	2	8	50	60	3.80	GI	3
3. Decision making skills	0	3	10	47	60	3.73	GI	4
4. Computer application	1	5	29	25	60	3.30	GI	7
5. Multilingual skills/ need of second language	0	9	27	24	60	3.25	GI	8
6. Research skills	0	6	23	31	60	3.42	GI	6
7. Professionalism	0	3	14	43	60	3.67	GI	5
8. Hands – on – experience	0	2	7	51	60	3.82	GI	1.5
Composite Mean						**3.60**	**GI**	

Table 15 shows that the most employable skills in the hotel industry as perceived by the respondents in the Housekeeping Department in the context of Personal skills were obtained a composite mean of 3.60 with an interpretation as greatly important. Critical thinking ability and Hands – on - experience were reached to the weighted mean of 3.82 with an interpretation as greatly important while Problem Solving and Identification were garnered a weighted mean of 3.80 with an interpretation as greatly important. The finding shows that personals skills are a significant agent of the organization, both results-oriented and process oriented to value not only achievements but also a lesson learned in every transaction and experience in the operations.

3.1.16 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

Table 16 On the employable skills in the hotel industry as perceived by the respondents in three departments, the researcher wanted to find out the Conceptual Skills of respondents working in the hospitality industry.

SKILLS	1	2	3	4	N	WM	DV	R
D. Conceptual Skills								
1. Organizational structure and policies	0	3	25	32	60	3.48	GI	4
2. Hospitality law and regulations	0	6	18	36	60	3.50	GI	3
3. Principles of marketing	0	7	26	27	60	3.33	GI	6
4. Finance and Accounting	0	8	26	26	60	3.30	GI	7
5. Human Resource Management	0	5	22	33	60	3.47	GI	5
6. Interrelationships	0	3	21	36	60	3.55	GI	2
7. Strategic Planning	0	3	18	39	60	3.60	GI	1
Composite Mean						**3.46**	**GI**	

Table 16 shows that the most employable skills in the hotel industry as perceived by the respondents in three departments in the context of Conceptual skills were garnered a composite mean of 3.46 with an interpretation as greatly important. Strategic planning was garnered a weighted mean of 3.60 with an interpretation as greatly important; Interrelationships has obtained a weighted mean of 3.55 with an interpretation as greatly important while Hospitality Laws and Regulation was garnered a weighted mean of 3.50 with an interpretation as greatly important. The finding shows that the intent of the supervisor should be the first consideration for any employee who is evaluating a strategic decision. It is very important to make sure that the employee should not clash or conflict with each other's command responsibility, determine levels of authority, and guide the lines of communication.

4. Conclusion

In the context of the findings of the study, the researcher concluded that the most employable skills as perceived by hotel supervisors in three departments (Housekeeping, Front Office and Food and Beverage) were Front Office Operational Ability, Leadership skills, Communication skills, Cooperative team building, Critical thinking ability, Hands-on experience, and Strategic planning were the seven employable skills possessing a most or greatly important need for hotel supervisors. Therefore, it can be implied that these skills offered in high need for curriculum enhancement. However, Restaurant Operational Management, Handling difficult people, Problem-solving and identification and interrelationship possess moderately important than their ability to perform the skills. Therefore, faculty in the college should investigate ways of enhancing while lodging administration, Negotiating skills, Computer Application and Finance and Accounting. Interestingly all four of the lowest rated employable skills in the hospitality industry are cornerstones taught, and it should still be retained because of its important ratings by the hotel supervisors.

5. Recommendations

The researcher recommended that this study

1. The HEIs must create awareness to graduates on the needs and expectations of the globalized job market. The implication of these findings for graduates and training providers are to provide opportunities for graduates to develop and use a range of skills to remain more competitive in the labor market. This can be done through industry attachment during their study or by negotiated job enlargement and enrichment with industry.
2. Should share with the faculty as a means to improve future graduate's competencies at performing the employable skills. This suggests that skills developments opportunities during their study in university are a key issue that needs to be addressed
3. Should be shared with industry professionals to close the gap between employers and educators, the implementation of the syllabus structure must involve both parties. Employers can be involved in providing input for the design and evaluation of particular subjects in the curriculum and the quality of graduates is increasingly becoming an important issue to both the higher learning institutions where graduates obtain their qualification to build and sustain rapport and keep communication lines open and supervisors represented the organization where provided feedback concerning graduates competencies were analyzed according to what they believed was greatly important in the way of employable ability skills to the workplace.
4. Future research should consist of more focused studies for each academic department represented. This would bring more clarity to each department as to the exact skill(s) in need and thus would allow for adequate enhancements to be made to all curricula. In addition, the researcher recommends in the future making a training module based on the Human Resource Skills (i.e., leadership Skills, communication skills, and cooperative team building skills, handling difficult people and public relations skills.

References

Ashley R. A., Bach, S. A., Chesser J. W., 8c Ellis E. T. (1995). A customer-based approach to hospitality education. *Cotvell Hotel and Restaurant Administration Quality*, 36(4). 74-79. Brophy, M., &Kiely, T.

(2002). Competencies: a new sector. *Journal of European Industrial Training*, 26(2-4) 165-177. Carey, M L, & Franklin, J. C. (1993) Industry output and job growth continue to slowinto the next century. Monthly Labor Review, 114{\ 1). 45.

Chung-Herrera B. G, Enz, C.A., &Lankau M. J. (2003). Grooming future hospitality leaders: a competencies model. *Cornell Hotel and Restaurant Administration Quality*, 44{3). 17-25.

Duffield, C. (1993). The Delphi Technique: a comparison of results obtained from two expert panels. *Intemational Joumal of Nursing Study*,20.227-237.

Foodservice education cones of age. (1991). *Restaurant Business*. 90(12). 106- 138.

Gale, L.E., &Pol, G (1975). Competence: a definition and conceptual scheme. *Educational Technology*, 19-25.

Goh, B. K. (2001). *Reahgnment hospitality management curriculum: hospitality skill assessment*. Unpublished doctoral dissertation. Nova Southeastern University, Fort Lauderdale, Florida, United States.

Homg, J. (2003). The development of Taiwan's hospitality education form the hospitality education models in the US and Australia. *Journal of Taiwan National University Education*, 48(2).125-150.

Hutton, L. (1997). US Education for hospitality careers. *The Advising Quarterly*, 42 (Fall).

Jenkins, D. & Smith T. (1994). Applying Delphi Methodology in family therapy research. *Contemporary Family Therapy*, 16.411-430.

Kay, C, &Russette, J. (2000). Hospitality-management competencies. *Cornell Hotel and Administration Quality*, 41(2).52-63.

Kim, H., & Ryan, B. (2004) Measuring students' perceptions of critical competencies hospitality operations: A longitudinal perspective. *Advances in Research* Vol. IX.373-382.

Kingston, P. (1998). Mature students say it can be done. *The Guardian*, 28 July, 18.

Koh, K. (1995). Desgning the four-year tourism management curriculum: a marketing approach. Journal of Travel Research, Summer. 68-7.

LeBruto, S.M., & Murray, K.T. (1994). The educational value of "Captive hotels." *Cornell Hotel Restaurant Administration Quality*, 35(4).72-79.

Lin, Y. (2001) The study of student's professional competency of department of food and beverage management in the senior high school. Unpublished Master Thesis, Chinese Culture University, Taipei, Taiwan, Republic of China.

Lin, S. (2002). Exploring the relationship between hotel management courses and industry required competencies. *Journal of Teaching in Travel & Tourism*, 2(3/4). 81-101.

Linstone, H. A. &Turoff M. (1975). *The Delphi Method.Technique and Applications*.Addison-Wesley: MA.

Loughlin, K. &Moore, L (1979). Using Delphi to achieve congruent objectives and activities in a pediatrics department. *Journal of Medical Education*, 54.101- 106.

Mariampolski, A., Spears, M., &. Vaden, A. (1980). What the restaurant manager needs to know: The consensus. *Cornell Hotel and Restaurant Administration Quality*, 21(3), 77-81.

Nath R., &Raheja, R (2001) Competencies in hospitality industry. *Journal of Service Research*, 7(1). 25-33.

Nelson, A.A. &. Dopson, L.R. (2001). Future of hotel education: Required skills and knowledge for graduates of US hospitality programs beyond the year 2000 - Part I. *Journal of Hospitality and Tourism Education*, 13(5), 58-67.

Okeiyi E., Finley, D., &Postel T. R. (1994). Food and beverage management competencies; educator, industry and student perspectives. *Hospitality & Tourism Educator*, 6(4). 37-40.

Partlow, G. C, & Gregoire B. M. (1994). Is graduate hospitality education relevant? Ask graduates. *Hospitality & Tourism Educators* 6(3). 13-16.

Prabhu, S. (1996). Challenges for hospitality and tourism operators: a North American perspective. *Intemational Journal of Contemporary Hospitality Management*, 8(1). P52-62.

Purcell, K. (1993). Equal opportunities in the hospitality: custom and credentials. *Intemational Journal of Hospitality Management*, 12(2). 53-61.

Reigel, C. D. (1990). Purpose, perspective, and definition: Toward and encompassing. *Hospitality and Tourism Educator*, 3(2), 18-32.

Sandwith, P. (1993). A hierarchy of management training requirements: The competency domain model. *Public Personnel Management*, 22(\).43-62.

Tas, RF. (1988). Teaching future manager. Cornell Hotel and Restaurant Administration Quality, 29(2). 41-43

Tas, R.F, LaBrecque, S. V., & Clayton, H.R. (1996). Property-management competencies trainees. *Comell Hotel and Restaurant Administration Quality*, 37(A).90-96.

Wang, L. (2001). Professional competencies required for food and beverage employees the house in intemational tourist hotel. Unpublished master's thesis. National General University, Taipei, Taiwan, Republic of China.

Wilhelm, W. J. (1999, April). *A Delphi study of desired entry-level workplace skills, competencies, and proof-of-achievement products*. Paper presented at the Annual Meeting of the Amencan Educational Research Association, Montreal, Quebec.

Wisch, R. J. (1991). The general education vs. careerism debate: Developing a hospitality education perspective.

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

The Asian Institute of Research
Journal of Economics and Business
Vol.2, No.2, 2019: 531-539
ISSN 2615-3726

DOI: 10.31014/aior.1992.02.02.106

Analyzing the Impact of Climatic and Economic Variables on Tourism Demand Fluctuation in Japan

Kazuhiko Nakahira[1], Masahiro Yabuta[2]

[1] Faculty of Economics, Meikai University, Chiba, Japan
[2] Faculty of Economics, Chuo University, Tokyo, Japan

Correspondence: Kazuhiko Nakahira, Faculty of Economics, Meikai University, Chiba, Japan. Email: nakahira@meikai.ac.jp

Abstract
The aim of this study is to analyze the influence of climatic and economic variables on seasonal tourism demand variations in Japan's major western areas. Seasonal tourism fluctuations can present a serious problem, since the profit and daily administration of stakeholders, as well as tourism policy design, are affected. Considering these aspects, this study investigated the influence of climatic and economic variables on tourism demand fluctuations in typical tourist destinations in western Japan. GMM (Generalized Method of Moments) estimations, based on two models, are implemented in an empirical study. The estimated parameters of the first model imply that rainfall is a negative factor in Kyoto's tourism, while temperature and price levels are positive elements. In spite of the presence of these positive factors in Hiroshima, we could not determine the effects of rainfall and vitalization of the regional economy on tourism in this area. In Naha, temperature, price level, and vitalization of the regional economy may increase the number of visitors. The second model's estimates for Kyoto imply that temperature, sunshine duration, and price level are positive influences. For Osaka, Fukuoka, and Hiroshima, we find that sunshine duration, and price level are positive factors. In Hiroshima, temperature is an additional positive factor, while the effects of vitalization of the regional economy cannot be determined. For Naha, temperature, price level, and vitalization of regional economy may increase the number of visitors, but no significant implication can be drawn about the effect of sunshine duration.

Keywords: Tourism Demand, Climatic Variable, Seasonal Fluctuation

1. Introduction

This study examines the influence of climatic and economic variables on tourism demand fluctuations and seasonality in western Japan's typical tourism destinations. Seasonal tourism fluctuation can be a serious problem since it has a certain influence on the profit and daily administration of stakeholders and tourism policy design.

The Gini coefficient is applied mainly to represent the state of the income distribution in economic context to the present. However, the Gini coefficient is often used for analyzing tourism fluctuation. Table 1 shows the estimated Gini coefficients from the year 2008 to 2016 for the selected five prefectures in the western part of Japan - Kyoto, Osaka, Hiroshima, Fukuoka, and Okinawa – to examine seasonal variations in tourism demand by using the data on approximate monthly total number of overnight guests (accommodation facilities with 10 or more employees). Regarding the estimated Gini coefficient, the following points can be considered. First, the seasonal fluctuations expressed by the Gini coefficient are smaller for Osaka and Fukuoka and relatively larger for Kyoto, Hiroshima, and Okinawa. Second, seasonal fluctuation varies by prefecture, but the Gini coefficients for each area generally seem to be declined after the year 2013. We can find these trends more concretely by Figure 1, which describes the graphs of the Gini coefficients shown in Table 1.[1]

Considering these aspects, this study investigated the influence of climatic and economic variables on tourism demand fluctuations in typical tourist destinations in western Japan. GMM (Generalized Method of Moments) estimations, based on two models, are implemented to investigate this problem, considering measurement error and the endogeneity of the variables as well as the correlation between the explanatory variables and the error term.

This paper is organized as follows. Section 2 provides a review of previous studies on the seasonal variation of tourism. The estimation method is described in Section 3, and Section 4 outlines an empirical analysis to investigate the influence of climatic and economic variables on tourism demand fluctuation in the typical tourist destinations in western Japan by applying GMM (Generalized Method of Moments) estimation. Finally, Section 5 summarizes and concludes the study.

Table 1: Gini Coefficients for Overnight Guests

area / year	Kyoto	Osaka	Hiroshima	Fukuoka	Okinawa
2008	0.08718	0.04656	0.07977	0.05118	0.08268
2009	0.09694	0.07152	0.08452	0.05830	0.07409
2010	0.08265	0.04905	0.07693	0.05095	0.08462
2011	0.10250	0.06649	0.08737	0.04654	0.09542
2012	0.08890	0.05619	0.07594	0.04912	0.08899
2013	0.08405	0.05473	0.08573	0.05543	0.08379
2014	0.06866	0.05329	0.07794	0.05486	0.09241
2015	0.07250	0.04944	0.07141	0.05249	0.06352
2016	0.05619	0.04076	0.06826	0.02515	0.06574
2017	0.05693	0.03272	0.06675	0.03673	0.06399

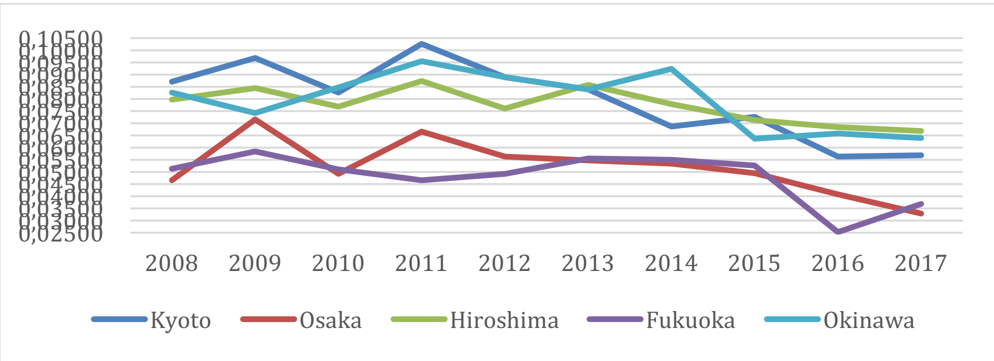


Figure 1: Gini Coefficients for Overnight Guests

2. Seasonality in Tourism: A Review

Previous studies on seasonal tourism variations mainly describe the technical aspects that are required to accurately comprehend seasonality for tourism demand prediction and to provide policy perspectives. Lundtorp (2001) provides a comprehensive explanation of seasonal tourism variation, and mentions the role of the supply chain and the continuity of transportation in seasonal variations of tourists' destination selections. Butler (2001) reviews the

[1] The data on "approximate total number of overnight guests (accommodation facilities with 10 or more employees)" for making Table 1 (and Figure 1) can be retrieved from the website of the Japan Tourism Agency, Ministry of Land, Infrastructure, Transport, and Tourism (http://www.mlit.zgo.jp/kankocho/siryou/toukei/shukuhakutoukei.html).

causes and effects of seasonal variations in tourism by pointing out the practical difficulties with regard to measures to mitigate variations. Lundtorp (2001) discusses some approaches to understanding seasonal tourism demand variations, including the use of the seasonal variation index and the Gini coefficient to reflect the size of the annual seasonal variation. To minimize the effects of seasonal variations on tourism, some researchers - including Kulendran and King (1997), Lim and McAleer (2001), and Goh and Law (2002) - estimate tourism demand precisely. By contrast, Koc and Altinay (2007) analyzes the Turkish seasonal tourism variation patterns by taking advantage of the X-12-ARIMA model, and outlines different patterns of visitors, tourism expenditures, and tourism expenditure seasonality.

Nadal *et al.* (2004) consider the relationship between the Gini index and economic variables such as GDP in assessing UK and German tourists who visit the Balearic Islands. They show that an increase in the UK or Germany's GDP, and a rise in the relative price between these two countries and the Balearic Islands, would decrease the Gini index. They also find that economic conditions such as income and relative price, are decisive factors in determining the number of visitors based on gravity theory.

The seasonal tourism fluctuation further depends on the characteristics of the destination. Visitors to nature-oriented destinations such as national parks are more influenced by climatic conditions than those who visit culture-oriented destinations. Morales (2003) analyzes the seasonality of three tourism destinations in Spain (Malaga, Granada, and Armenia), and emphasized the effect of culture-oriented policies such as the construction of an art museum in decreasing the Gini index. Morales (2003) also finds that attractions such as cultural exhibitions and theater performances are unrelated to tourism seasonality. Cuccia and Rizzo (2011) classify six Sicilian destinations (in Italy) into four clusters according to their cultural attractiveness, showing that seasonality depends on the variety of cultural attractions.

Tourism demand seasonality is rather a supply-side issue; its impact affects tourism management. Decision-making by the managers of accommodation facilities, catering services, attractions, and tour operators is based on investment and fund management, and aims to realize flexible employment, tourism, and a differentiation strategy. In this respect, a policy to mitigate seasonal variation is necessary for stable and profitable management (Lee *et al.* (2008)). However, because some causes of tourism seasonality, which are related to natural- and socio-economic factors, do not correspond with each other, various strategies and individual evaluations should be determined. On the other hand, Kulendran and Dwyer (2010; 2012) focus on economic factors, in addition to climatic elements, when considering the influence of seasonal fluctuations on tourism demand.

3. Method

This section describes the method used in our empirical analysis of the influence of climatic and economic variables on tourism for the selected five prefectures in the western part of Japan - Kyoto, Osaka, Hiroshima, Fukuoka, and Okinawa. The sample period of estimation (monthly basis) is 2008:M1 (January) to 2017:M12 (December). Our dataset is composed of the following variables.[2]

- V: approximate total number of overnight guests (accommodation facilities with 10 or more employees); prefectural data (Kyoto, Osaka, Hiroshima, Fukuoka, Okinawa), monthly, final figures (Transition Table in Table 4-2, result of the survey "Overnight Travel Statistics," January to December 2017, final report, the Japan Tourism Agency, Ministry of Land, Infrastructure, Transport, and Tourism).
- R: amounts of rainfall (mm) at observation sites (in the cities of Kyoto, Osaka, Hiroshima, Fukuoka, and Naha (in the Okinawa prefecture)), monthly, issued by the Japan Meteorological Agency.
- T: average air temperature (°C) at observation sites (in the cities of Kyoto, Osaka, Hiroshima, Fukuoka, and Naha (in the Okinawa prefecture)), monthly, issued by the Japan Meteorological Agency.

[2] The data on "approximate total number of overnight guests" can be retrieved from the website of the Japan Tourism Agency, Ministry of Land, Infrastructure, Transport, and Tourism (http://www.mlit.zgo.jp/kankocho/siryou/toukei/shukuhakutoukei.html). The "amounts of rainfall," "average air temperature," and "total sunshine duration" were obtained from the Japan Meteorological Agency's website (https://www.data.jma.go.jp/gmd/risk/obsdl/index.php#). The "consumer price index" is available from the "e-stat" website (https://www.e-stat.go.jp/dbview?sid=0003143513). The data on "Indices of Industrial Production (prefectural data)" can be retrieved from the website of the Ministry of Economy, Trade, and Industry (http://www.meti.go.jp/statistics/tyo/iip/chiiki/index.html).

S: total sunshine duration (hours) at observation sites (in the cities of Kyoto, Osaka, Hiroshima, Fukuoka, and Naha (in the Okinawa prefecture)), monthly, issued by the Japan Meteorological Agency.
P: consumer price index, prefectural data (Kyoto, Osaka, Hiroshima, Fukuoka, and Okinawa), monthly, original index, all items, base year = 2015, issued by the Ministry of Internal Affairs and Communications.
I: indices of industrial production, prefectural data (Kyoto, Osaka, Hiroshima, Fukuoka, and Okinawa), monthly, original index, manufacturing (Item Number: 2A00000000) (Kyoto and Osaka), mining and manufacturing (Item Number: 2000000000) (Hiroshima, Fukuoka, and Okinawa), base year = 2010, issued by each prefectural government office and the Ministry of Economy, Trade, and Industry.

“V” is the proxy variable for tourism demand and “I” is the proxy variable for the level of vitalization of the regional economy. In addition, our empirical analysis focuses on western Japan, namely, on the cities of Kyoto, Osaka, Hiroshima, Fukuoka, and Naha (in the Okinawa prefecture). The climatic variables, R, T, and S were observed at the observation sites of the Japan Meteorological Agency in each area or city. In short, they represent a city-level or town-level data set. By contrast, the economic variables, V, P, and *I* reflect the prefectural data that were observed by several governmental offices. In this study, the prefectural data are regarded as proxy variables for city- or town-level data in conducting the empirical research based on the regional tourism.

For our empirical study, we implemented a GMM (Generalized Method of Moments) estimation by considering the measurement error and endogeneity of the variables, in addition to the correlation between the explanatory variables and the error term. Our GMM estimation was conducted with the assumption that the consumer price index for each area is endogenous, and with the Newey-West HAC (heteroskedasticity and autocorrelation consistent) weighting matrix to accommodate the possibility of serial correlation and heteroscedasticity.

Concretely, our estimations were conducted by the following two types of specification ("ln" means the natural logarithm):

<Model (1)>

$$lnV_t = \alpha_0 + \alpha_1 lnR_t + \alpha_2 lnT_t + \alpha_3 lnP_t + \alpha_4 lnI_t + e_t,$$

<Model (2)>

$$lnV_t = \alpha_0 + \alpha_1 lnT_t + \alpha_2 lnS_t + \alpha_3 lnP_t + \alpha_4 lnI_t + e_t.$$

Instrument specifications regarding these two estimations are provided in the notes of Tables 6 and 7.

4. Empirical Results

We implemented a GMM (Generalized Method of Moments) estimation for Model (1) and Model (2), under the conditions and assumptions described in the former section. Further details regarding this estimation are provided in the notes of Tables 6 and 7. Since we should take a critical stance toward this type of estimation, Hansen’s test for over-identification, the endogeneity test for variables, and the test for weak instrument variables utilizing Cragg-Donald statistic and Stock-Yogo critical values, were conducted.

The results of the endogeneity tests (Wu - Hausman test) for the variables in Models (1) and (2) of our estimations - $ln(P)$, price level - for our areas of research interest are shown in Tables 2 and 3, respectively. The null hypotheses of exogeneity can be rejected at the conventional level by the test statistics for the case of Naha (in Okinawa prefecture) alone. This result means that our estimation Models (1) and (2) do not always fit well for the areas of interest, except for Naha, in terms of setting the endogenous variable. However, the main purpose of this research is to analyze the influence of climatic and economic variables on seasonal tourism variation as a type of spatial movement in several Japanese areas. Thus, we were obliged to proceed with the investigation, with careful attention to the possibility of an incomplete estimation model.

Further, to investigate the weak identification problem pointed out by some studies (including Mavroeidis (2004)), we use the Cragg and Donald (1993) statistic and the Stock and Yogo (2005) critical values.[3] In Table 4, the Cragg-Donald F-statistics of the five areas under consideration in Model (1) are apparently larger than the Stock-Yogo critical values for both relative bias and size. Thus, the null hypothesis of weak identification is rejected for each area. In addition, we can obtain the same result for Model (2) by considering Table 5. Therefore, the test results imply that the sets of instrumental variables for our two estimation models are valid.

Table 6 reports the GMM estimation results for the five areas under consideration, namely, Kyoto, Osaka, Hiroshima, Fukuoka, and Naha (in Okinawa), with respect to Model (1). Considering Hansen's diagnostic test, the null hypotheses of over-identification for the GMM estimation cannot be rejected, thus supporting the validity of the moment conditions, as shown by the J-statistic and the p-value in the table.

With regard to the estimated parameters of Model (1) for Kyoto, the coefficient of *R* is barely significant at the 10% level, with our expected sign. The coefficient of *T* is significant at the 1% level, and the coefficient of *P* is also significant, but the level of significance is 10%. The signs of *T* and *P* are controversial. By contrast, *I* is apparently insignificant. This result implies that rainfall is a negative factor for tourism in Kyoto, although temperature and price level are positive elements. As for Osaka and Fukuoka, only the coefficient of *P* is significant. In this respect, the estimation results for Osaka and Fukuoka do not have any positive implications. The estimated parameters of *T* and *P* for Hiroshima are significant at the 1% level. Thus, temperature and price level are positive factors. However, we cannot determine the effects of rainfall and vitalization of the regional economy on tourism of Hiroshima. By contrast, Naha's coefficients on *T*, *P*, and *I* are sufficiently significant at the 1% level, but *R* is not significant at the conventional level. Therefore, temperature, price level, and vitalization of the regional economy may enlarge the number of visitors to Naha (in the Okinawa Prefecture),

Table 2: Endogeneity Test for Model (1)

Test instruments	Difference in J-statistics			Restricted	Unrestricted
	Value	d.f.	p-value	J-statistic	J-statistic
ln(*P*) for KYOTO	0.001137	1	0.9731	3.622982	3.621845
ln(*P*) for OSAKA	2.280432	1	0.1310	7.627244	5.346813
ln(*P*) for HIROSHIMA	0.069769	1	0.7917	5.814584	5.744814
ln(*P*) for FUKUOKA	0.688497	1	0.4067	4.253648	3.565151
ln(*P*) for NAHA	5.850323	1	0.0156	9.141542	3.291219

Table 3: Endogeneity Test for Model (2)

Test instruments	Difference in J-statistics			Restricted	Unrestricted
	Value	d.f.	p-value	J-statistic	J-statistic
ln(*P*) for KYOTO	0.002659	1	0.9589	3.599661	3.597002
ln(*P*) for OSAKA	0.368527	1	0.5438	1.931043	1.562516
ln(*P*) for HIROSHIMA	0.436444	1	0.5088	3.280394	2.843951
ln(*P*) for FUKUOKA	0.996301	1	0.3182	4.797472	3.801172
ln(*P*) for NAHA	3.100485	1	0.0783	5.488646	2.388161

Table 4: Weak Instrument Diagnostics for Model (1)

	Kyoto	Osaka	Hiroshima	Fukuoka	Okinawa
Cragg-Donald F-stat	387.4917	621.9983	550.7365	644.6691	561.6538
Stock-Yogo TSLS critical values (relative bias)					
5%			18.37		
10%			10.83		
20%			6.77		
30%			5.25		

[3] See Cragg and Donald (1993), Stock, Wright, and Yogo (2002), and Stock and Yogo (2002) for details.

Stock-Yogo critical values (size)	
10%	26.87
15%	15.09
20%	10.98
25%	8.84

Table 5: Weak Instrument Diagnostics for Model (2)

	Kyoto	Osaka	Hiroshima	Fukuoka	Okinawa
Cragg-Donald F-stat	522.1223	798.7839	676.8538	782.9972	745.3656
Stock-Yogo TSLS critical values (relative bias)					
5%	16.85				
10%	10.27				
20%	6.71				
30%	5.34				
Stock-Yogo critical values (size)					
10%	24.58				
15%	13.96				
20%	10.26				
25%	8.31				

Table 6: GMM Estimation for Model (1)

Variable	Coefficient for Kyoto	Coefficient for Osaka	Coefficient for Hiroshima	Coefficient for Fukuoka	Coefficient for Naha
Const.	-4.614378	-8.444575	-7.845590	-5.772492	-21.24247
std. error	8.169264	9.051577	4.081459	4.357503	5.173116
t-statistic	-0.564846	-0.932940	-1.922252	-1.324725	-4.106320
prob.	0.5733	0.3528	0.0571	0.1879	0.0001
Ln(R)	-0.053257	-0.012658	-0.007516	0.002632	0.021971
std. error	0.027098	0.017901	0.022304	0.022119	0.014845
t-statistic	-1.965352	-0.707080	-0.336977	0.118984	1.480017
prob.	0.0518	0.4810	0.7368	0.9055	0.1417
ln(T)	0.152832	0.034756	0.176992	0.018060	0.475974
std. error	0.043960	0.053835	0.032241	0.039140	0.113259
t-statistic	3.476623	0.645611	5.489596	0.461434	4.202523
prob.	0.0007	0.5198	0.0000	0.6454	0.0001
ln(P)	3.746781	4.601562	4.685646	4.024557	6.929490
std. error	2.032413	2.020348	1.094210	1.024956	1.165738
t-statistic	1.843513	2.277608	4.282218	3.926567	5.944296
prob.	0.0679	0.0246	0.0000	0.0001	0.0000
ln(I)	0.263452	0.371284	-0.165525	0.232424	0.403180
std. error	0.318585	0.427801	0.307667	0.230923	0.136861
t-statistic	0.826943	0.867890	-0.538000	1.006501	2.945905
prob.	0.4100	0.3873	0.5916	0.3163	0.0039
weight iterations	9	10	13	19	5
s.e. of regression	0.227336	0.222925	0.193476	0.170578	0.167781
instrument rank	9	9	9	9	9
J-statistic	3.619882	4.640390	5.850846	3.752282	2.921277
prob(J-statistic)	0.459886	0.326224	0.210568	0.440568	0.571085

Notes: Instrument specification: Constant, lnR_t, lnR_{t-1}, lnT_t, lnT_{t-1}, lnP_{t-1}, lnP_{t-2}, lnI_t, lnI_{t-1} , Sample (adjusted): 2008M03 – 2017M12. Included observations = 118 (after adjustments). Estimation weighting matrix: HAC (Bartlett kernel, Newey-West fixed bandwidth = 5). Standard errors and covariance computed using HAC weighting matrix (Bartlett kernel, Newey-West fixed bandwidth = 5).

Although nothing can be concluded with respect to the effect of rainfall.

Overall, we cannot find any areas in our investigation that correspond entirely to estimation Model (1). However, Model (1) relatively fits with Kyoto and Naha. In addition, it still needs further work to consider the signs of the estimated coefficients on temperature and price level, as well as the causality between these two factors and the number of visitors.

Table 7 reports the estimation result by the GMM method for the five focus areas of Model (2). By considering the J-statistic and the p-value in the table, we can determine that the null hypotheses of over-identification for GMM estimation cannot be rejected by Hansen's test, and that the validity of the moment conditions is supported.

With respect to the parameter estimation based on Model (2) for Kyoto, the coefficients on *T*, *S*, and *P* are significant at the 5% level, while the one on *I* is apparently insignificant. This result implies that temperature, sunshine duration, and price level are positive elements for tourism in Kyoto. As for Osaka and Fukuoka, *S*, and

Table 7: GMM Estimation for Model (2)

Variable	Coefficient for Kyoto	Coefficient for Osaka	Coefficient for Hiroshima	Coefficient for Fukuoka	Coefficient for Naha
Const.	-8.624910	-18.10068	-4.741969	-8.051280	-23.17704
std. error	8.583699	7.618994	5.117800	3.762183	5.876944
t-statistic	-1.004801	-2.375731	-0.926564	-2.140055	-3.943723
prob.	0.3171	0.0192	0.3561	0.0345	0.0001
ln(*T*)	0.105964	0.007213	0.136608	-0.010439	0.422147
std. error	0.044736	0.049997	0.033653	0.045783	0.145409
t-statistic	2.368637	0.144263	4.059334	-0.228022	2.903177
prob.	0.0195	0.8855	0.0001	0.8200	0.0044
ln(*S*)	0.162462	0.230834	0.138073	0.126638	0.018337
std. error	0.063716	0.070414	0.057348	0.045021	0.046898
t-statistic	2.549775	3.278259	2.407618	2.812844	0.391007
prob.	0.0121	0.0014	0.0177	0.0058	0.6965
ln(*P*)	4.515104	6.525695	3.699646	4.500800	7.425631
std. error	2.178762	1.786953	1.328033	0.923435	1.301462
t-statistic	2.072326	3.651856	2.785808	4.873977	5.705608
prob.	0.0405	0.0004	0.0063	0.0000	0.0000
ln(*I*)	0.165876	0.301224	-0.004973	0.137256	0.366916
std. error	0.342871	0.438822	0.350609	0.235586	0.143904
t-statistic	0.483787	0.686439	-0.014183	0.582616	2.549733
prob.	0.6295	0.4938	0.9887	0.5613	0.0121
weight iterations	10	8	8	15	8
s.e. of regression	0.229657	0.221383	0.179335	0.173273	0.168073
instrument rank	8	8	8	8	8
J-statistic	3.574340	1.680483	3.057462	4.087280	2.333840
prob(J-statistic)	0.311248	0.641281	0.382850	0.252192	0.506069

Notes: Instrument specification: Constant, lnT_t, lnT_{t-1}, lnS_t, lnS_{t-1}, lnP_{t-1}, lnI_t, lnI_{t-1}, Sample (adjusted): 2008:M02 – 2017:M12. Included observations = 119 (after adjustments). Estimation weighting matrix: HAC (Bartlett kernel, Newey-West fixed bandwidth = 5). Standard errors and covariance computed using HAC weighting matrix (Bartlett kernel, Newey-West fixed bandwidth = 5).

P are significant at the 1% level, while the others are not. In this respect, we find that sunshine duration and price level are positive factors for tourism in Osaka and Fukuoka. The coefficients on *T* and *P* are significant at the 1% level, and that of *S* is significant at the 5% level in the case of Hiroshima. *I* is insignificant. Thus, temperature, sunshine duration, and price level can be regarded as positive factors for Hiroshima's tourism, although we cannot determine the effects of vitalization of the regional economy. By contrast, the coefficients on *T* and *P* for Naha are noticeably significant at the 1% level, and the one on *I* is significant at the 5% level. However, *S* is not significant at the conventional level, and this result might contradict our intuition in general. Thus, temperature, price level, and vitalization of the regional economy may increase the number of visitors to Naha (in the Okinawa Prefecture), although no significant implication can be drawn about the effect of sunshine duration.

On the whole, Model (2) fits Kyoto, Hiroshima, and Naha relatively well. As for Model (1), we need to consider the signs of the estimated coefficients on temperature and price level, as well as the causality between these two factors and the number of visitors.

5. Concluding Remarks

This study investigated the influence of climatic and economic variables on tourism in five areas in western Japan. For our empirical study, the GMM (Generalized Method of Moments) estimations based on two kinds of specifications (Model (1) and Model (2)) were implemented, considering the measurement error and endogeneity of the variables, in addition to the correlation between the explanatory variables and the error term. Our GMM estimations were made under the assumption that the price level is endogenous, and with the Newey-West HAC (heteroskedasticity and autocorrelation consistent) weighting matrix to accommodate the possibility of serial correlation and heteroscedasticity.

The estimated parameters of Model (1) imply that rainfall is a negative factor for Kyoto’s tourism, while temperature and price level are positive elements. Positive implications cannot be derived for Osaka and Fukuoka. While temperature and price level are positive factors, we cannot determine the effects of rainfall and vitalization of the regional economy on Hiroshima’s tourism. For Naha (in the Okinawa Prefecture), temperature, price level, and vitalization of the regional economy may increase the number of visitors; however, no conclusions can be drawn about the effect of rainfall.

The Model (2) estimations for Kyoto imply that temperature, sunshine duration, and price level are positive tourism elements. By contrast, we find that sunshine duration and price level are positive factors for Osaka and Fukuoka’s tourism. With respect to Hiroshima, temperature, sunshine duration, and price level can be regarded as positive factors, although the effects of vitalization of the regional economy cannot be determined. For Naha, temperature, price level, and vitalization of the regional economy may increase the number of visitors; however, nothing can be concluded in terms of the effect of sunshine duration.

Note that we cannot find any areas of investigation that fits the estimation Models (1) and (2) entirely. Further work is required to consider the signs of the estimated coefficients on temperature and price level, as well as the causality between these two factors and the number of visitors.

References

Baum, T., and Lundtorp, S. (2001), *Seasonality in Tourism*, Pergamon.

Butler, R. W. (1994), “Seasonality in Tourism: Issues and Problems,” in A. V. Seaton (ed.), *Tourism, the State of the Art*, Wiley, Chichester, pp. 332-339.

Butler, R. W. (2001), “Seasonality in Tourism: Issues and Implications,” in T. Baum and S. Lundtorp (eds.) (2001), *Seasonality in Tourism*, Pergamon, pp. 5-22.

Cragg, J. G. and Donald, S.G. (1993), “Testing Identifiability and Specification in Instrumental Variables Models,” *Economic Theory*, Vol. 9, No. 2, pp. 222-240.

Cuccia, T., and Rizzo, I. (2011), “Tourism Seasonality in Cultural Destinations: Empirical Evidence from Sicily,” *Tourism Management*, Vol. 32, pp. 589-595.

Davidson, R., and Mackinnon, J. G. (1993), *Estimation and Inference in Econometrics*, Oxford University Press, New York.

Davidson, R, and Mackinnon, J. G. (2009), *Econometric Theory and Methods* (International Edition), Oxford University Press, New York.

Goh, C., and Law, R. (2002), “Modeling and Forecasting Tourism Demand for Arrivals with Stochastic Non-Stationary seasonality and Intervention,” *Tourism Management*, Vol. 23, pp. 499-510.

Koenig, N., and Bischoff, E.E. (2004), “Analyzing Seasonality in Welsh Room Occupancy Data,” *Annals of Tourism Research*, Vol. 31, No. 2, pp. 374-392.

Koc, E., and Altinay, G. (2007), "An Analysis of Seasonality in Monthly per Person Tourist Spending in Turkish Inbound Tourism from a Market Segmentation Perspective," *Tourism Management*, Vol. 28, Issue 1, pp. 227-237.

Kulendran, N., and Dwyer, L. (2009), "Measuring the Return from Australian," *Journal of Travel Research*, Vol. 47, pp. 275-284.

Kulendran, N., and Dwyer L. (2010), *Seasonal Variation versus Climate Variation for Australian Tourism: Executive Summary*, Gold Coast, Australia: CRC for Sustainable Tourism Pty Ltd.

Kulendran, N., and L. Dwyer, L. (2012), "Modeling Seasonal in Tourism Flows with Climate Variables," *Tourism Analysis*, Vol. 17, No. 2, pp. 121-137.

Kulendran, N., and M. King (1997), "Forecasting International Quarterly Tourist Flows Using Error-Correction and Time-Series Models," *International Journal of Forecasting*, Vol. 13, Issue 3, pp. 319-327.

Mavroeidis, S. (2004), "Weak Identification of Forward-looking Models in Monetary Economics," *Oxford Bulletin of Economics and Statistics*, Vol. 66, No. S1, pp. 609-635.

Lee, C., Bergin-Seers, S., Galloway, G., O' Mahony, B., and McMurray, A. (2008), *Seasonality in the Tourism Industry: Impacts and Strategies*, Queensland: CRC for Sustainable Tourism.

Lim, C., and McAleer, M. (2001), "Monthly Seasonal Variations: Asian Tourism to Australia," *Annals of Tourism Research*, Vol. 28, No.1, pp. 68-82.

Lundtorp, S. (2001), "Measuring Tourism Seasonality," in T. Baum and S. Lundtorp (eds.) (2001), *Seasonality in Tourism*, Oxford: Pergamon, pp. 23-50.

Matzarakis, A. (2006), "Weather- and Climate-Related Information for Tourism," *Tourism and Hospitality Planning and Development*, Vol. 3, No. 2, pp. 99-115.

Morales, A. F. (2003), "Decomposing Seasonal Concentration," *Annals of Tourism Research*, Vol. 30, No. 4, pp. 942-956.

Nadal, J. R., Font, A. R., and Rossell, A. S. (2004), "The Economic Determinants of Seasonal Patterns," *Annals of Tourism Research*, Vol. 31, No. 3, pp. 697-711.

Nakahira, K., Yabuta, M., and Ozawa, T. (2015), An Empirical Investigation of Tourism Demand and Seasonality in Japanese Remote Islands: A Panel Data Analysis, paper presented at the 14th International Conference of the Japan Economic Policy Association.

Nakahira, K., and Yabuta, M. (2017), An Empirical Investigation of Tourism Demand Variability: The Gini Index and Entropy Measure Approach, *Discussion Paper*, No. 295, Institute of Economic Research, Chou University.

Ridderstaat, J., Oduber, M., Croes, R., Nijkamp, P., and Martens, P. (2014), "Impacts of Seasonal Patterns of Climate on Recurrent Fluctuations in Tourism Demand: Evidence from Aruba," *Tourism Management*, Vol. 41, pp. 245-256.

Stock, J. H., and Yogo, M. (2005), "Testing for Weak Instruments in Linear IV Regression," in Andrews, Donald W. K., and James H. Stock (eds.), *Identification and Inference for Econometric Models: Essays in Honor of Thomas Rothenberg*, Cambridge: Cambridge University Press, pp. 80-108.

Stock, J. H., Wright, J. H., and Yogo, M. (2002), "A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments," *Journal of Business and Economic Statistics*, Vol. 20, No. 4, pp. 518-529.

Verbeek, M. (2017), *A Guide to Modern Econometrics*, 5th ed., New York: Willey.

Zhang, H. Q., Kulendran, N., and Song, H. (2010), "Measuring Returns on Hong Kong's Tourism Marketing Expenditure," *Tourism Economics*, Vol. 16, No. 4, pp. 853-865.