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# The Relationship Between Green Marketing Adoption and Business Size: Evidences from Agro-processing Sector in Morogoro, Tanzania

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## Abstract

Green Marketing is among the contemporary issues in the field of Marketing. While many studies have been done in this field elsewhere, little studies have been conducted in Tanzania. Thus, this study aimed at identifying the level of green marketing adoption among agro-processing businesses in the context of Tanzania and studying the influence of business size on green marketing adoption. Data were collected from 120 micro, small and medium enterprises operating in agro-processing sector in Morogoro region. The findings show that, the level of adoption of green marketing practices is low as most businesses adopted relatively few practices. Also, it was found that, there is an association between business size and level of adoption of green marketing practices. It has to be noted that, the findings are limited to agro processing industry in Morogoro since the applicability of these findings to other industries is uncertain as data were collected in agro-processing industry.

**Keywords:** Green Marketing, Green Marketing Practices adoption and Business size

## 1. Introduction

Sustainability and ecological matters are among the contemporary pressing concerns for modern humanity, governments, and green conscious consumers (Hsu et al, 2013). It has to be noted that, business activities including marketing have a role to play to enhance sustainable development. Polonsky (1997) adds that, marketing as business function has to ensure the future generations' ability to meet their needs and wants is not compromised. On the other hand, Robert (2011) argues that, sustainable development needs sustainable marketing with strategies which are competitive but ecological sustainable as well. Therefore, the role of marketing in development is significantly reorganized (Kotler, 2010).

As we are striving to enhance sustainable development, regulatory bodies encourage the adoption of green supply chain management practices (Dubey et al, 2015; Zhu et al, 2012; Tseng et al 2015). Moreover, Ashton et al (2017) adds that, government and customer pressure are influencing factors towards adoption of green marketing. This

has made businesses to operate under strictly evaluation of government and non-government stakeholders for their accountability towards both environmental and social concerns (Lee, 2008). On the other hand, Kirchoff et al (2016) adds that, managers are motivated by benefits associated with green practices such as enhanced reputation, efficiencies, effectiveness, differentiation, and revenue growth.

According to Kirchoff et al (2016) a business would adopt green marketing practices due to internal and external forces. Nevertheless, Dardan et al (2007) argues that, the adoption of certain innovation will be affected by business size. Businesses with enough resources such as skilled human, technology, financial will be in the position to adopt the new innovation early and fully than the smaller one. According to Zhu and Sarkis (2006), the organizational size is more important for green practices adoption and has impact on organization performance (Choi et al, 2001). Some findings suggest that, large businesses are in a position to adopt green Marketing practices due to the resource capacity (Mitra and Data, 2014). Also, large businesses tend to get affected much by government pressure on adopting green practices in the process compared with small businesses (Vachon and Klassen, 2006). Nevertheless, the study done by Zhu et al (2008) in china found that, organization size plays a positive role in the adoption of green practices. Unfortunately, there are mixed findings on organization size's influence on green marketing adoption. For example, a large business will be less advantaged by structural inertia that is they tend to be less agile and flexible than small organization (Vachon & Klassen, 2006 and Sulaiman, et al 2015) while the small business be flexible to receive changes at any time (Zhu et al, 2006). In addition to that, there is a limited literature in Tanzania on business size and adoption intensity of green marketing. This motivates to conduct a study on relationship between business size and green marketing adoption intensity in the context of Tanzania in Agro-processing sector. Therefore, the aim of this study is twofold: To establish the level of adoption of green marketing practices and to investigate the relationship between business size and level of adoption of green marketing practices.

## **2. Literature Review**

This part includes the theoretical review, key terms and empirical review on business size and adoption of green marketing practices.

### **2.1 The Concept of Green Marketing Practices**

There are various green marketing practices most of them revolve around the traditional marketing four Ps: green product, green pricing, green promotion, green distribution (Polonsky 1994; Kinoti 2011). Different researchers have reported different green practices that have been adopted by most business. Polonsky (1994) suggests that green marketing practices include product modifications, changes to the production method and process, modifying advertisement and packaging. Nevertheless, effective green marketing practices have to be based on green packaging, green branding, labeling, and advertising to create attention and demand for sustainable products (Juwaheer et al 2012). Interestingly Sarkar (2012) agreed that green marketing comprises a wide range of activities: Product modification, packaging, changes to production process, remodeling and coming with a new style as well as basing on ads that promote green consumption. For the purpose of this study, the green marketing practices as suggested by Polonsky (1994) and Kinoti (2011) were examined to measure the level of green marketing adoption. Moreover, it has to be considered that, the level of adoption of green marketing practices is based on the number of practices been adopted.

### **2.2 Business Size**

Business size refers to the scale of organization and operations of a business enterprise. Different countries use various measures of size depending on their level of development. The commonly used indexes are total number of employees, total investment and sales turnover. According to United republic of Tanzania (URT) small and medium enterprises development policy of 2003, businesses are being categorized into four groups: Micro, small, and medium enterprises (SMEs). It has to be noted that, SMEs are considered the engine of innovation and achieving sustainable development. They may solve societal and environmental problems (Kardosa 2012). Then,

studying the relationship between business size (micro, small and medium enterprises) and level of adoption of green marketing was essential.

### 2.3 Resource based theory (RBT)

Resource based theory holds that in order for a business to be and remain competitive in a market, has to seek and protect the unique resources (Barney & Warnerfelt, 1995). Dowel & Heart (2011) recommends that, a business has to seek, protect and utilize both intangible and tangible resources in order to remain competitive. In that sense, if resources are made available in a required capacity and utilized in effective and efficiency manner, realization, of business success become certain. Therefore, in line with resource-based theory, business characteristics, particularly the availability of crucial resources, can influence the levels of adoption of green practices (Uhlener et al.2012). This is because, the available resources will be used to add more unique and inimitable resources that will make a business to remain powerful and competitive. In the context of SMEs, larger firms are more likely to engage in sustainable practices as they have more resources, and greater influence from stakeholders than small business (Uhlener et al. 2012; Lynch-Wood and Williamson 2014). Therefore, the study draws on the theory to consider that, a business with enough resources have a potential to invest their resources to get more unique resources such as green technology which in turn help a business to be more competitive.

### 2.4 Green Marketing Adoption and Business Size

The size of the business is among the internal variables which affect adoption of green marketing practices. Business characteristics, in specific the availability of crucial resources, influence the levels of adoption of green practices (Uhlener et al.2012). Dardan et al (2007) argues that, the adoption of certain innovation will be affected by the business size. Companies with enough resources like skilled human, technology, financial will be in the position to adopt the new innovation early and fully than the smaller one. Zhu & Sarkis (2006) suggest that, the organizational size is more important for green practices adoption and has impact on organization performance (Choi et al,2001). Some findings suggest that, large sized businesses are in position to adopt green marketing practices due to the resource capacity (Uhlener et al. 2012; Lynch-Wood & Williamson 2014; Mitra & Data, 2014 and Singh et al, 2014). Also, large businesses compared to small businesses tend to get affected much by government pressure as they adopt green practices in the process (Vachon & Klassen, 2006). Nevertheless, the study done by Zhu et al (2008) in China found that, organization size plays a positive role in the adoption of green marketing practices. However, looking at it from another side, a large business will be less advantaged by structural inertia, that is they tend to be less agile and flexible than small organization (Sulaiman, et al 2015). It takes a lot of time to make decision due to its management structure. Even if small business suffers from technology and financial resources, but they will be more active and quicker to adopt and meet new needs of the market (Zhu et al, 2006). Furthermore the study about green marketing done by Ofunya (2012) and Durmaz & Yaşar (2016) findings show that green marketing adoption is influenced by regulations, customer and consumers pressure, corporate social responsibility, increasing thrust on environmental issues, firm's reputation, performance, market share, competitive advantage.

While authors such as Zhu and Sarkis (2006) and Zhu et al (2008) acknowledges that business size influences the level of adoption of green marketing, other studies such as Zhu et al (2006) and Vachon & Klassen (2006) contradicts as whether small and large businesses have equal chance of adopting green marketing practices. On the other side, little prior studies conducted in Tanzania such as Kimario (2014) focused on the relationship between customer demand and green product innovation among SMEs. Thus, this study aims at establishing the level of green marketing adoption among agro-processing businesses and studying the influence of business size on Green Marketing adoption in the context of Tanzania.

Therefore, our research questions were:

*RQ1: What is the level of adoption of green marketing?*

*RQ2: Does the size of the business influence the level of adoption of green marketing?*

### 3. Methodology

The study employed descriptive design with survey study approach, where by data were collected from 120 micro, small and medium enterprises operating in agro-processing sector in Morogoro region, Tanzania. The sample was obtained using purposive sampling technique, the techniques was viable due to inability of getting reliable database for agro processing small and medium enterprises in Morogoro region. As recommended by Baker (2003), the study sample should comprise people who possess the information that the research intends to gather. Therefore, business owners, leaders, marketing or operation managers were used as unit of inquiry to get the intended results. Data were collected using questionnaire. Questionnaires were refined by removing ambiguities and some difficult words after a pilot study. Thereafter, data analysis was done, whereby a chi square was used to test the relationship between dependent variable (Adoption level of Green Marketing Practices) and independent variable (Business size).

### 4. Findings

This part includes the finding regarding business size, adoption level of green marketing and the relationship between green marketing adoption and business size.

#### 4.1 Business Size

Business characteristics in terms of size was captured during the study; the size of the business gauged against the amount of capital (In Tanzania Shillings) invested in the business. The size of the business ranged from Micro, Small and Large Business. Table 4.3 shows the number of businesses in their respective business categories.

Table 4.1: Business Size

Business Size	Frequency	Percent
Micro Business	38	31.7
Small Business	43	35.8
Medium Business	39	32.5
Total	120	100.0

It was found that, 31.7percent accounts for micro business those with less than Tsh. 5 million as capital invested, 35.8percent accounts for small business those with Tsh. 5million to 200million, while the rest 32.5percent are medium business those with more than Tsh.200 to 800million as capital invested. This indicates that the business sizes categories are normally distributed therefore was suitable for the researchers to run a chi square test against the level of adoption (high and low) to test its association as indicated in table 4.3.

#### 4.2 Adoption of Green Marketing Practices

In order to establish the set of green marketing practices adopted by agro processing business, respondents were asked to indicate whether they adopted or not adopted on each practice. Twelve practices as suggested by Polonsky (1994) and Kinoti (2011) were used as shown in table 4.2.

Table 4.2: Composition of Green Marketing Practices by Adoption Counts

Green Marketing Practices	Status	Count(n)
Production of eco-friendly products	Not Practicing	13
	Practicing	107
Use of eco-friendly Packages	Not Practicing	36
	Practicing	84
Water recycling	Not Practicing	112

	Practicing	8
Use of Clean energy/Renewable (gas, biogas, solar etc.)	Not Practicing	76
	Practicing	44
Charging high Price for Green Products	Not Practicing	17
	Practicing	103
Green label usage	Not Practicing	65
	Practicing	55
Promotes Green Lifestyle	Not Practicing	51
	Practicing	69
Promotes the Benefits of Green Products	Not Practicing	45
	Practicing	75
Promotes Green Image of the Product	Not Practicing	64
	Practicing	56
Reverse Channel system (Collecting wastes for recycling)	Not Practicing	105
	Practicing	15
Use of Economic and energy efficiency Transport	Not Practicing	65
	Practicing	55
Use of Secondary Packages (Containers)	Not Practicing	89
	Practicing	31

*n-Indicates number of those who adopted and not adopted*

From the Research findings above in Table 4.2, it was found that, many businesses adopted few green marketing practices since 107 out of 120 businesses engaged in Production of at least one green product, while 84 out of 120 businesses used green package and 103 out of 120 businesses was charging high price for green product (green price). Nevertheless, some green marketing practices were not adopted by many businesses these includes the use of secondary packages (89/120 businesses), reverse channel system (105/120 businesses), water recycling (112/120 businesses), and use of renewable energy (76/120 businesses). Most businesses did not adopt these green marketing practices due to cost associated with Green Technology and low demand of green products.

### 4.3 Level of Adoption of Green Marketing Practices

The study aimed at identifying the level of Adoption of Green Marketing Practices. The level of adoption was measured against the number of practices adopted out of 12 practices as shown in table 4.2 i.e. less than or equal to six practices was regarded as low extent while 7 to 12 practices was regarded as high extent of adoption as shown in Table 4.3.

Table 4.3 Adoption level of Green Marketing Practices in relation to business size

Adoption Level	Frequency	Percent
Low Extent ( $\leq 6$ Practices)	81	67.5
High Extent (7 -12 Practices)	39	32.5
Total	120	100.0

The results indicate that 81/120 business that's 67.5 percent had adopted at least 1 to 6 Practices (Low extent of adoption), while 39/120 businesses that's 32.5 percent had adopted 7 to 12 Practices (higher extent). Therefore; the adoption level of green marketing practices among agro processing businesses was low, as 67.5 percent of businesses adopted only below or six practices out of twelve practices tested. This might be due to capital constraints as micro and small business had less adoption compared to medium business.

#### 4.4 The Relationship between Business Size and Adoption Level of Green Marketing

Our purpose was to establish the relationship between business size and green marketing adoption level. Then, the two variables, business size, and adoption level were tested. Business size was measured against the capital invested as shown in table 4.1 and adoption level was gauged against the number of green marketing practices adopted as shown in table 4.2 above. Table 4.4 below shows the chi square test of independence output as generated from SPSS.

Table 4.4 Chi square Value and P value

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.359 <sup>a</sup>	2	.025
Likelihood Ratio	7.268	2	.026
N of Valid Cases	120		

*0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.35.*

*Phi Value=.248*

In order to ascertain the association between business size and adoption level the chi square of independence was performed. No any cell had expected count less than 5. The minimum expected count was 12.35, therefore the assumption was met. The relationship between business size and adoption level of green marketing practices is significant since the *P-value* is 0.025 which is less than significance level of 0.05. Therefore, business size and adoption level of green marketing are not independent. Also, it was observed that the business size affects the adoption level at medium level of Phi Value .248 as shown in table 4.4.

#### 5. Discussion and implications

The findings show that, different green marketing practices were adopted. Few of them were highly adopted among businesses. Practices like, green product, green price, use of eco-friendly packages and green promotion (promoting green life style) were found to be adopted by many businesses compared to others. But, green marketing practices such as green process (water recycling, use of green energy), green place (use of secondary packages) were found to be less adopted, since few businesses adopted these practices compared to others. The less adopted practices could be contributed by financial associated factors as it is very costful to install green technology (Polosnky, 1994; Kinoti, 2011). Moreover, it was found that, the level of adoption of green marketing practices was low as most businesses adopted relatively few practices, which is less than or equal to six practices. On the other hand, medium businesses (those with large capital than small and micro) were found to adopt many practices than small and micro business. This could be due to financial power the medium business possess as Dardan (2007) argues that, those businesses with enough capital have a greater chance to go green than those with less capital due to the initial green technology costs associated with (Polosnky, 1994; Kinoti, 2011).

We also found that, there is an association between business size and level of adoption of green marketing practices since medium business adopted many practices than small and micro ones. Our findings appear to support earlier studies such as Dardan (2007); Uhlaner et al (2012); Lynch-Wood and Williamson (2014); Mitra and Data (2014) & Singh et al (2014) which report that, a business with enough resources including large capital has a chance to go green than one with low capital. This is due to the initial financial resources required to be invested at initial stages. Moreover, it should be noted that, the study focused only in one industry, which is agro processing industry in Morogoro region in Tanzania. Therefore the findings are limited to agro processing industry in Morogoro since the applicability of these findings to other industries is uncertain.

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