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Evaluation of National Character in 53 Countries Based on the Social Capital Concepts

Ichiro Mukai[1]

[1] Faculty of Management, Aichi Gakuin University, Nagoya, Japan

Correspondence: Ichiro Mukai, Faculty of Management, Aichi Gakuin University, Nagoya, Aichi, 4628739, Japan. Tel: 81–52–911–1011-. E-mail: ichiro@dpc.agu.ac.jp

Abstract
The purpose of this study is to measure the national character of the 1990s and 2000s, and compare the changes in their measurements in order to propose that national character changes with the times. This study focuses on 53 countries around the world. National character is defined by the concept of social capital, characterized by three components. Using the data from the World Values Survey, factor analysis and structural equation models measure six factors of national character, which relates to three components of social capital concepts. The changes in national character are evaluated by the comparison of the values and differences in population means between the answers to questions in the 1990s and the 2000s. This study finds that the measurements of six factors have changed from 1990s to 2000s. By comparing the 1990s and the 2000s, the results of measurements show that each factor of national character changes with the times. This implies that the measurements of national character used in previous studies may not always adequately represent the current situation in each country.

Keywords: Comparative Study, International Accounting, National Character, Social Capital

1. Introduction

Recently, many countries have adopted the International Financial Reporting Standards (IFRS) for the preparation of financial statements. The International Accounting Standards Board (IASB) asserts that the application of IFRS provides transparent and comparative information for users. However, various environmental factors have influenced the development of accounting systems through differences in national character, resulting in variations among business activities and accounting practices. Therefore, even when financial statements are prepared in accordance with de facto standards like IFRS, it may still be challenging to compare financial information among firms in different countries.

This study aims to measure national character in 53 countries for use in the analysis of international comparative accounting research. For a long time, it was believed that national character would remain constant over time. Previous research relied on measures of national character surveyed in the late 1960s and early 1970s. In contrast,

this study measures national character in many countries using survey results from the 1990s to the 2000s and assesses whether national character undergoes changes.

The study focuses on countries that were surveyed at least once in the 1990s and 2000s by the World Values Survey Association (WVSA). WVSA has been conducting the World Values Survey (WVS) since 1980 and has published seven survey rounds to date. National character is measured using WVS data, and both factor analysis and structural equation modeling (SEM) are employed. Changes in national character are assessed by evaluating the measurements and ranks of their constituents in each country, as well as by testing differences in population means between responses to each question in the 1990s and 2000s.

The study reveals that national characters in many countries undergo changes between the 1990s and the 2000s. This contributes to the provision of new measurements of national character for examining international comparative and time-series accounting research.

The remainder of this paper is organized as follows. Section 2 discusses previous research related to national character, with a focus on culture, and reviews accounting literature that examines the effects of cultural dimensions on financial information. Next, Section 3 outlines the materials and research design for measuring national character. Section 4 presents descriptive statistics for adjusted questionnaire data and the results of measuring national character in each country. Finally, Section 5 provides some conclusions and discusses the implications of this paper.

2. Prior Research

2.1 Surveys of Cultural Values

The study of nationhood has a long history in the field of anthropology (Benedict, 1934; Kardiner, 1939; Linton, 1945). The term national character has rarely been defined and has been used in a variety of ways. According to Inkeles (1997), many previous studies have pointed to a common denominator, "a common or standardized characteristic of a particular society." This is a useful concept in the pursuit of understanding the causes and consequences of social systems created by humans.

In the field of accounting, Gray (1988) demonstrates that culture significantly influences the development of accounting systems and delves into the extent to which cultural factors can explain and predict international variations in accounting practices. Furthermore, Gray (1988) proposes a theory of cultural influence on the development of accounting systems through international comparisons based on societal values identified by Hofstede (1980; 1984). Since then, during the 1990s, numerous researchers have empirically analyzed Gray's theoretical model[i].

Hofstede (1980) focuses on academicians and challenges previous theoretical studies in psychology, organizational sociology, and management and conducts a questionnaire survey of approximately 110,000 employees in 40 countries[ii] at IBM Co. (Hermes in the book), a multinational corporation with subsidiaries all over the world, around 1967 and 1973. Hofstede (1980) reveals that organizations are constrained by culture by conducting surveys and detecting similarities and differences in the national cultures of the world's major countries. In the study, four factors that constitute culture are presented as social values: Power Distance, Uncertainty Avoidance, Individualism & Collectivism, and Masculinity & Femininity. The social value is measured by country.

Hofstede (2001) was published as a revised version of Hofstede (1980) in response to the rapid changes in politics, business and the way of thinking (idea) since Hofstede (1980). Hofstede (2001) covers 50 countries by adding 10 countries to the 40 covered in Hofstede (1980).

The social values are presented as five, with the addition of Long- Versus Short-Term Orientation to the four social values of Hofstede (1980). However, the measures of social values in Hofstede (2001) remain unchanged for the

four social values of Hofstede (1980) and are added only for the ten newly included countries. The new social values, "long-term and short-term orientation," were measured based on the China Values Survey (CVS) conducted by Hong Kong scholar Bond (Bond, Michael Harris) in 1985[iii)] and the European Media Marketing Survey (EMMS)[iv)] in 1997. While Hofstede (1980) measured four social values based on a survey conducted on IBM's employees in 40 countries, the fifth social value was measured based on a different survey.

In 2010, Hofstede et al. (2010) were published along with his son (Gert Jan Hofstede) and Minkov (Michael), who are familiar with the cultures of Eastern European countries, as co-authors. Hofstede et al. (2010) introduced "Indulgence Versus Restraint" as the sixth social value to the five social values of Hofstede (2001).

Hofstede et al. (2010) surveyed 78 countries and territories (collectively "countries")[v)] for Hofstede's (1980) four social values, and 96 countries[vi)] for the remaining two social values. However, for Hofstede's (1980) four social values, the findings for 50 out of the 78 countries remain consistent with those from Hofstede (1980) and Hofstede (2001). Long-Term Versus Short-Term Orientation and Indulgence Versus Restraint were measured using the WVSA's WVS and not based on a survey of IBM employees.

Similar to Hofstede's cross-cultural study, the Global Leadership & Organizational Behavior Effectiveness (GLOBE) project conducted a study involving 62 countries, and also conducted surveys in 2008 and 2014. The surveys in 2008 and 2014 of GLOBE employed both qualitative and quantitative analysis methods, but the number of countries surveyed decreased from 62 countries in 2004 to 25 in the 2008 study and 24 in the 2014 study.

GLOBE extends Hofstede's (2001) five social values to measure national characteristics using nine cultural dimensions and to study the expected leadership behaviors in each country based on characteristics. The nine cultural dimensions are Performance Orientation, Assertiveness, Future Orientation, Humane Orientation, Institutional Collectivism, In-Group Collectivism, Gender Egalitarianism, Power Distance, and Uncertainty Avoidance (House et al., 2004[vii)]). Some of the items in the GLOBE cultural dimensions are identical or similar to Hofstede's societal values.

The Hofstede and GLOBE studies are similar in that they both assess national characteristics from a cultural perspective and find that the characteristics of each country influence organizational behavior. These studies are also considered important in studying the attributes of financial information prepared and disclosed under management's responsibility. On the other hand, a number of inconsistencies can be pointed out between Hofstede's measurement results on societal values and GLOBE's measurement results on cultural dimensions. These differences, whether they pertain to societal values or cultural dimensions, pose challenges in terms of the reliability of the measurement results.

The studies by Hofstede and GLOBE are similar in that both assess national character based on culture and find that the national character of each country affects organizational behavior. These studies contribute to the examination of the attributes of financial information prepared and disclosed by management. However, the results of measuring certain cultural dimensions, such as uncertainty avoidance and institutional collectivism, diverge from the societal values that Hofstede labels as uncertainty avoidance and collectivism. Discrepancies in the measurements of the same or similar dimensions raise some questions about the findings of these studies.

2.2 Surveys of Social Capital

Other studies have evaluated national character using the concept of social capital derived from social theory. The concept of social capital is the broad idea that social relationships are resources that help people act effectively (Dasgupta & Serageldin, 1999). Various researchers offer different definitions of social capital. Putnam (1993) defines social capital as the features of social organizations, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions. Since then, many studies have used trust, norms, and networks as the three elements of social capital.

Putnam (1993) divides trust into two categories: thick trust and social trust. Thick trust refers to beliefs that arise from intimate relationships with individuals. Social trust refers to general trust relationships with other members of the wider community. Social trust helps to develop the social capital of an area because it generates broader cooperation with other members of that area. In a complex environment such as the modern one, social trust can come from norms of reciprocity and networks of civic participation.

Among the different types of norms, Putnam (1993) pays particular attention to the norm of reciprocity. The norm of reciprocity is interdependent exchange, which is classified into balanced reciprocity and generalized reciprocity. The norm of balanced reciprocity is the simultaneous exchange of equivalent items. The norm of generalized reciprocity is a persistent relationship of exchange based on the mutual expectation that, at a certain point in time, the exchange is unbalanced, but in the future, equilibrium will be achieved. The norm of generalized reciprocity is based on altruism, which would provide utility to others in the short run, and selfishness, which would enhance the utility of all parties in the long run. Thus, the generalized norm of reciprocity is a highly productive component of social capital.

Putnam classifies civic engagement networks into horizontal networks and vertical networks. Horizontal networks refer to the everyday ties of individuals and the range of their mutual activities. Vertical networks relate to the degree of hierarchical and subordinate ties to the community and organization, such as community activities and the formation of various organizations. For example, vertical networks are less reliable than horizontal networks because subordinates in organizations do not like to be exploited and protect themselves by not disclosing much information.

Putnam thus divides social capital into trust, norms, and networks and points out that these concepts can be further classified and interpreted. Social capital has attracted much attention in the field of social sciences such as economics and business administration, and is used to explain the economic development of countries and corporate behavior[viii].

Many organizations have conducted surveys and analyses of social capital with various purposes. The Institute of Statistical Mathematics (ISM) in Japan has been conducting the "International Comparison of Attitudes" survey since 1953, when it conducted a survey on the Japanese national character. ISM published a comprehensive report based on 54 basic questions for nine countries in 2015.

In order to analyze the relationship between economic development and social capital, the Organisation for Economic Co-operation and Development (OECD) has examined methods for surveying and measuring social capital (Healy & Cote, 2001; Scrivens & Smith, 2013). Scrivens & Smith (2013) provide four interpretations of social capital, such as (i) personal relationships, (ii) social network support, (iii) civic engagement, and (iv) trust and cooperation norms, along with associated survey questions, although no measurements have been conducted to date.

The World Bank has been conducting research and analysis on the relationship between social capital and economic disparity using quantitative and qualitative analytical methods to develop social capital for the purpose of poverty eradication and sustainable economic growth.

Grootaert & van Bastelaer (2002) developed the methods for investigating social capital by categorizing social capital into three categories: (i) the relationships and the networks, (ii) the trust and the adherence to norms, and (iii) the collective action. In a result, the Social Capital Assessment Tool (SOCAT) was proposed as an evaluation tool that establishes guidelines for conducting household surveys, community surveys, and organizational surveys.

Grootaert and Narayan (2004) have developed the Integrated Questionnaire for the Measurement of Social Capital (SC-IQ) as a tool to assess social capital focusing on household surveys in developing countries. This is a questionnaire-based measurement of social capital divided into six categories: (i) groups and networks, (ii) trust and cooperation, (iii) collective action and cooperation, (iv) information and communication, (v) social cohesion and

cohesion, and (vi) power and political activity. The World Bank has been conducting pilot tests using these assessment tools, but has not released the results of the measurements for all countries in the world.

The International Social Survey Program (ISSP) which was established by a joint initiative of the United Kingdom, Australia, Germany and the United States, now has 57 member-countries. ISSP conducts fundamental studies and research on important topics in the social sciences[ix]. The ISSP has surveyed around 50,000 people in 30 to 40 countries on 11 topics, with a relatively small number of questions, approximately 30, on each topic.

While, in many social capital surveys, there are problems such as the small number of surveyed countries and questions, and the lack of measurement, WVSA is the organization that conducts the largest number of surveys on social capital in terms of countries covered, scope of questions, and number of questions.

The WVSA, an organization consisting of sociologists from around the world, performs the WVS to study changes in the attitudes of people in different countries and their impact on social, cultural, and political activities. The WVS has been started since the first survey (Wave 1) in 1981, and the seventh survey (Wave 7) was delayed due to COVID-19 but completed in 2022, with more than 400,000 participants from 100 countries, representing about 90% of the world's population. The Wave 6 survey covered 61 countries and was based on 262 questions related to a wide range of political, economic, labor, religious, family, social, environmental, and international issues. WVS is noteworthy for assessing the national character because it encompasses the largest number of countries and the broadest range of perspectives.

The survey provides various information on the abstract concept such as social capital, with the characteristics of big data that has recently much attention (Mukai, 2017b). The WVS has also been used, in part, to measure social values in Hofstede (2001) and Hofstede et al. (2010), as well as to validate the results of the GLOBE survey. This is useful for expanding and developing research that evaluates national character from a cultural perspective.

Mukai (2017a; 2017b; 2017c) emphasized the importance of assessing national characteristics and the suitability of utilizing the WVS to measure them, building on the previous studies mentioned above. Mukai (2019) assesses national character in about seven countries, using the data of Wave 6 (2010-2014) in WVS. However, because the purpose of his research is to develop the research framework for using international accounting study, Mukai (2019) focused on relatively economically developed countries. As a result, the differences in national character from the global level are not found. Therefore, by expanding the survey countries and the survey year of the questionnaire used, this paper provides an assessment of how the national character of many countries has changed over time and in its current state.

3. Materials and Method

3.1 Data and Samples

Many international comparative studies have used the societal values published in a series of Hofstede's research to examine the effect of cultural differences on accounting systems. These scores have been adjusted on a scale from 0 to 100 based on the average responses to questions and the results of factor analysis. However, the questions and their answers were surveyed in the late 1960s and early 1970s and have been not updated. This study examines whether national character has changed over time and, if so, how it has changed.

This study measures national character using the data from Wave 3 to Wave 6, which includes an expanded set of countries. In total, 101 countries are surveyed across Wave 3 to Wave 6, with an average of 2.15 surveys per country. To investigate as many countries as possible, Wave 3 and Wave 4 (Wave 3 & 4) and Wave 5 and Wave 6 (Wave 5 & 6) were each aggregated to reveal the measurement and change of national character at different times. The total countries surveyed are 73[x] for Waves 3 & 4 and 80[xi] for Waves 5 & 6. Wave 3 & 4 is a questionnaire survey conducted from 1995 to 2004. National character is called "the national character of the 1990s". Waves 5 & 6 is a questionnaire survey conducted from 2005 to 2014. National character is called "the national character of the 2000s".

The number of countries surveyed in both Wave 3 & 4 and Wave 5 & 6 was 53. There are a total of 528 questions asked from Wave3 to Wave6. Wave 3 through Wave 6 have 88 common questions, 51 of which were answered by all 53 countries. Among these questions, 44 questions were answered on the Likert scale.

3.2 Research Design

National character in the 1990s and 2000s are measured by the following procedure.

i)   Select a country where the national characteristics of the 1990s and the 2000s can be compared by conducting a questionnaire survey at least once in Waves 3 & 4 and Waves 5 & 6.
ii)   Select the questions that are answered on the Likert scale from all the questionnaire surveys from Wave 3 to Wave 6.
iii)   Sort all answers in the order of lower rating, since there were differences in the order of the Likert scale for responding.
iv)   Select factors for measuring national character by factor analysis using the answers to all questions from Wave 3 to Wave 6. The factor analysis uses the maximum likelihood method [xii] and the varimax rotation[xiii].
v)   Exclude questions with low commonality, less than 0.2, as a result of factor analysis. Then, perform factor analysis again to select the questions that measure national character.
vi)   Name each factor as representing the contents of questions, assuming that each factor extracted as a result of factor analysis constitutes national character.
vii)   Draw a path diagram for SEM for each factor.
viii) Perform SEM based on the drawn path diagram, using answers to selected questions in Waves 3 and 4 related to measuring national character in the 1990s, and in Waves 5 and 6 related to measuring national character in the 2000s.
ix)   Measure each national character in the 1990s and 2000s by inputting the average of the answers to the questions for each country into the equation using the unstandardized coefficient and residuals calculated by SEM.

Next, the following two methods will be used to verify whether the national character has changed over time.

i)   Test the differences in the population means between the answers to common questions in Waves 3 & 4 and Waves 5 & 6.
ii)   Evaluate the magnitude of changes and the changes in ranking regarding the measurements of each factor in Waves 3 & 4 and Waves 5 & 6.

4. Descriptive Statistics and Results

Factor analysis based on responses to 44 questions from Wave 3 to Wave 6 excluded question items with low commonality. There were 30 questions that use to measure national character. The descriptive statistics by country and item for 30 questions in Waves 3 & 4 and Waves 5 & 6 are omitted here.

Table 1 shows the results of factor analysis. Factor analysis finds six factors for constitute national character. As a result of scrutinizing the results of factor analysis, each factor relates to 'trust," "norms," and "networks" that constitute national character in the social capital concepts.

Table 1: Results of Factor Analysis

No.	Ques. No.	Trust in Social Systems	Norms for Life and Sex	Religious Spirits	Norms for Law and Discipline	Happiness from a Calm Society	Motivation to Political Activities

1	E06902	0.435	0.078	0.099	0.059	0.029	-0.006
2	E06905	0.533	0.026	0.010	-0.029	0.003	0.067
3	E06906	0.572	-0.058	-0.024	0.094	0.081	0.011
4	E06907	0.825	0.024	-0.005	0.013	0.011	-0.016
5	E06908	0.692	0.051	0.025	0.011	0.006	0.004
6	E06911	0.754	0.039	0.017	0.024	0.037	-0.075
7	E06912	0.745	0.046	0.009	-0.026	0.018	0.004
8	E06913	0.489	0.023	0.079	-0.018	0.081	-0.010
9	E06920	0.423	-0.043	0.019	-0.016	0.036	0.040
10	F118	0.015	0.691	0.149	0.091	-0.146	-0.152
11	F119	0.046	0.667	0.097	0.241	-0.070	-0.058
12	F120	0.010	0.706	0.279	0.097	0.034	-0.115
13	F121	0.068	0.697	0.184	0.027	-0.010	-0.132
14	F122	0.052	0.578	0.274	0.107	-0.009	-0.112
15	F123	-0.011	0.535	0.140	0.267	-0.013	-0.073
16	A006	0.046	0.233	0.784	-0.004	0.014	-0.067
17	E06901	0.217	0.174	0.613	-0.026	0.010	-0.066
18	F028	0.039	0.196	0.641	-0.035	0.055	-0.004
19	F034	-0.010	0.104	0.671	0.011	-0.009	-0.037
20	F063	-0.009	0.221	0.762	0.006	0.054	-0.090
21	F114	0.021	0.063	-0.020	0.603	0.002	0.046
22	F115	0.045	0.132	0.000	0.668	0.013	-0.008
23	F116	0.038	0.158	0.030	0.714	0.064	-0.019
24	F117	-0.028	0.181	-0.053	0.663	0.018	0.055
25	A008	0.089	-0.012	0.076	0.037	0.539	0.027
26	A170	0.045	-0.063	0.010	0.023	0.841	0.028
27	C006	0.095	-0.067	-0.008	0.016	0.662	0.018
28	E025	-0.004	-0.229	-0.096	0.090	0.118	0.653
29	E026	0.048	-0.126	-0.068	0.013	0.001	0.719
30	E027	0.008	-0.113	-0.046	-0.012	-0.015	0.661

SEM is performed on the extracted factors by factor analysis and finds unstandardized coefficients and residuals for representing the relationship among questions. Panels A to F in FIGURE 1 show the path diagrams for performing SEM and the results of analyses. Each component of national character is measured by substituting the average value of the answers to each question into the SEM result. Panels A to F in Table 2 (at the end of this section) show the scores of factors, their rankings and changes in each country between Waves 3 & 4 and Waves 5 & 6.

Comparing the 1990s and 2000s for scores of each factor, in many countries, the measurements of "trust in social systems," "norms for life and sex," and " happiness from a calm society (security)" have increased, and the measurements of the "religious spirits (godliness)," "norms for law and discipline," and "motivation to political activities" have decreased. These scores and their changes represent the country's and regional characteristics.

"Trust in social systems" is measured by trust in various organizations with a certain purpose, including public services. In both the 1990s and 2000s, measurements of "trust in social systems" show high scores in Asian countries such as Vietnam, China, India, and the Philippines, and Nordic countries such as Norway and Sweden. They were low scores in South American countries such as Mexico, Argentina, and Peru, and in Eastern European countries such as Romania and Serbia.

"Norms for life and sex" is measured from the perspective of the value of life and the discipline of sexual activity. In both eras, the measurements of "norms for life and sex" were high in Middle Eastern countries such as Jordan and Iran, Asian countries such as Pakistan, Indonesia and Vietnam, and African countries such as Egypt, Nigeria,

Zimbabwe and Morocco. They showed low scores in Nordic countries such as Finland, Norway and Sweden, European countries such as Germany, United Kingdom, Spain and Switzerland, and Oceania countries such as New Zealand and Australia.

"Religious spirits" is measured from the degree of devotion, including participation in daily religious activities. The measurements of "religious spirits" were high in African countries such as Morocco, Nigeria, Zimbabwe and Egypt, and in Asian countries such as Indonesia, the Philippines and Pakistan. They were low in Asian countries such as Vietnam, Japan and China, and European countries such as Germany and Estonia, including Nordic countries such as Sweden and Norway.

"Norms for law and discipline" are measured from the perspective of justifying illegal activities. The measurements of "norms for law and discipline" are high in countries such as Japan, Morocco, Jordan, Australia, Pakistan, Egypt, Vietnam, and low in the former Soviet Union countries such as Ukraine, Belarus and Moldova in both the 1990s and 2000s.

"Happiness from a calm society (security)" is measured from the satisfaction of one's life. In both the 1990s and 2000s, the measurements of " happiness from a calm society " show high scores in South American countries such as Mexico and Colombia, Nordic countries such as Sweden, Norway, and Finland, as well as European countries such as Switzerland and the UK. They were low in the former Soviet Union countries such as Belarus, Moldova, Ukraine, Armenia, Georgia and Russia.

"Motivation to political activities" is measured from participation in political activities as a group using horizontal networks. Measures of "motivation to political activities" were measured in both the 1990s and 2000s, including Nordic countries such as Sweden, Norway and Finland, European countries such as the UK and Germany, Oceania countries such as New Zealand and Australia, North American countries such as the US and Canada. They were low in the former Soviet Union countries such as Azerbaijan and Kyrgyz, and Asian countries such as the Philippines and Vietnam.

Each factor of national character changes from the 1990s to the 2000s as followings.

From the 1990s to the 2000s, indexes of "trust in social systems" have increased in about 90% of the surveyed countries and this reveals that the relationship between the people and the social system is improving. However, the measurements of "trust in social systems" in countries such as Taiwan, Iraq, Hungary, Moldova and Egypt have declined. Among the countries surveyed, there are more than 10 ranking changes in 20 countries, mainly in the former Soviet Union. Among the former Soviet Union countries, Kyrgyz has moved up the ranks of 30, and Azerbaijan and Estonia have also risen ranking significantly. On the contrary, Moldova and Ukraine have greatly lowered their ranks. In addition, the ranks of Eastern European countries such as Hungary and Poland have also declined, particularly with Iraq and Egypt having large declines in measured values, and their rankings have fallen to about 40th.

In the 2000s, "norms for life and sex" measurements increased in about 70% of the countries surveyed compared to the 1990s, indicating a shift in thinking about life's dignity and gender discrimination. In the ranking of the countries surveyed, the former Soviet Union countries such as Armenia, Azerbaijan, Belarus and Estonia showed a rise of more than 10th rank. In the 2000s, the former Soviet Union countries occupied four countries in the top ten. On the other hand, the measurements in African countries such as Algeria and South Africa, South American countries such as Brazil and Chile, and Asian countries such as Singapore and Taiwan have been declining, and their ranks have fallen by more than 10th.

Regarding "religious spirits" in the 2000s, the measured value has decreased in about 85% of the surveyed countries compared to the 1990s, and the religious spirits have decreased. Among the countries surveyed, there was no significant change in the countries included in the top 10 countries and the bottom 10 countries. It was in Eastern European countries such as Romania, Poland, and Serbia, including former Soviet Union countries such

as Georgia, Armenia, and Ukraine, that the measurements increased and ranks increased. On the other hand, the measurements in the UK dropped the most, and the rank also dropped more than 40th place.

In the 2000s, the measurements of "norms for law and discipline" decreased in about 70% of the surveyed countries compared to the 1990s, and the norms for law and discipline decreased. In the ranking of the countries surveyed, there are more than 10 ranking changes in 23 countries. " Norms for law and discipline" of the former Soviet Union were generally low ranked in the 1990s, but in the 2000s Azerbaijan ranked first and Georgia and Armenia ranked in the top 10. In addition, European countries such as Switzerland and Germany, including Eastern European countries such as Romania and Hungary, have greatly increased their ranks. On the other hand, Asian countries such as Pakistan, Vietnam, South Korea, India, Singapore, and the Philippines, and African countries such as Zimbabwe, South Africa, and Algeria have fallen in the measurements and their ranks have dropped significantly.

In the 2000s, compared to the 1990s, the measured values of "happiness from a calm society" increased in all countries except Britain, and the sense of well-being is increasing worldwide. Pakistan has risen the most in the measurements, rising from 45th rank to 12th rank. The former Soviet Union countries still have low measurements in both the 1990s and 2000s, while the measurements in Armenia and Georgia have increased, but their ranks have declined.

Regarding the "motivation to political activities" in the 2000s, the measurements decreased in about 65% of the surveyed countries compared to the 1990s. The willingness to actively participate in political activities is declining. Relatively large increases in measurements have been made in European countries such as Switzerland, Serbia and Spain and countries such as Argentina and Pakistan. Meanwhile, Egypt's measurements fell sharply, dropping from 21st in the 1990s to 50th in the 2000s. Other than that, including the former Soviet Union countries such as Ukraine and Kyrgyz, the measurements of Eastern European countries such as Romania and Hungary have fallen sharply, and their ranks have dropped significantly.

Therefore, the test of the differences in the population means was performed by using the answers to the questions in Waves 3 & 4 and Waves 5 & 6 to examine whether national character changes with the times. The results of tests for differences in population means of answers to questions in Waves 3 & 4 and Waves 5 & 6, showed statistically significant for each country and region.

Table 2: Measures and Changes in Factors of National Character

Country	Region	Trust in Social Systems				Norms for Life and Sex				Religious Spirits			
		1990s		2000s		1990s		2000s		1990s		2000s	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Algeria	Africa	4.037	43	4.178	46	17.758	8	17.414	20	8.149	19	8.128	11
Egypt	Africa	4.281	9	4.042	52	17.890	6	18.618	7	8.497	8	8.213	9
Morocco	Africa	3.978	47	4.372	24	17.580	10	18.214	15	8.353	11	8.598	1
Nigeria	Africa	4.255	13	4.401	20	17.841	7	18.491	8	8.787	2	8.542	2
South Africa	Africa	4.280	10	4.424	18	16.912	18	16.476	33	8.405	10	8.087	14
Zimbabwe	Africa	4.369	5	4.468	14	18.383	2	18.419	11	8.554	6	8.437	4
China	Asia	4.538	2	4.810	2	16.740	21	18.047	17	6.269	53	6.267	54
India	Asia	4.301	7	4.600	4	16.951	14	18.071	16	8.128	20	8.190	10
Indonesia	Asia	4.235	17	4.434	16	18.350	3	18.992	3	8.709	3	8.444	3
Japan	Asia	4.130	30	4.354	26	15.378	40	15.807	38	6.799	52	6.564	53
Pakistan	Asia	4.138	29	4.244	36	18.434	1	19.034	2	8.700	4	8.421	6
Philippines	Asia	4.395	4	4.569	6	16.580	24	16.735	28	8.588	5	8.429	5
Singapore	Asia	---	---	4.703	3	17.008	13	16.734	29	8.172	18	7.598	26
South Korea	Asia	4.195	22	4.372	23	16.372	29	16.733	30	7.103	47	7.043	38

Country	Region	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Taiwan	Asia	4.280	11	4.260	32	16.694	22	16.360	34	7.420	36	7.017	39
Viet Nam	Asia	4.737	1	5.193	1	17.601	9	18.401	12	6.933	49	6.848	46
Armenia	Europe	4.070	37	4.259	33	16.379	27	18.840	4	7.710	30	7.957	20
Azerbaijan	Europe	4.166	25	4.497	9	16.921	16	18.622	6	7.954	26	7.305	33
Belarus	Europe	4.217	20	4.457	15	15.901	34	17.408	21	7.540	32	7.391	32
Bulgaria	Europe	4.221	19	4.236	39	15.785	36	15.727	40	7.233	43	7.227	34
Estonia	Europe	4.176	23	4.488	11	15.615	38	16.862	27	7.001	48	6.775	49
Finland	Europe	4.225	18	4.570	5	14.825	45	15.110	44	7.329	38	7.195	36
France	Europe	---	---	4.291	29	---	---	14.465	50	---	---	6.746	50
Georgia	Europe	4.079	36	4.261	31	17.059	12	18.786	5	8.036	24	8.241	8
Germany	Europe	4.029	45	4.275	30	14.002	50	15.104	45	6.824	51	6.732	51
Hungary	Europe	4.116	33	4.108	48	15.201	41	16.213	35	7.169	45	6.969	42
Kyrgyzstan	Europe	4.053	40	4.495	10	17.318	11	18.452	9	7.825	28	7.704	24
Moldova	Europe	4.127	31	4.062	49	16.777	20	17.399	22	7.955	25	7.732	23
Norway	Europe	4.353	6	4.564	7	14.973	44	14.272	52	7.121	46	6.778	47
Poland	Europe	4.171	24	4.192	44	16.628	23	17.153	24	7.629	31	7.970	19
Romania	Europe	4.069	38	4.202	41	16.244	30	17.920	18	8.077	21	8.084	15
Russian Federation	Europe	4.045	41	4.236	38	16.148	31	16.621	32	7.275	42	7.219	35
Serbia	Europe	3.963	49	4.055	50	16.130	32	15.269	42	7.452	35	7.574	27
Slovenia	Europe	4.024	46	4.054	51	14.995	43	14.681	48	7.322	40	6.994	41
Spain	Europe	4.098	34	4.254	34	14.732	47	14.640	49	7.483	33	6.777	48
Sweden	Europe	4.243	16	4.477	12	13.301	52	13.506	54	6.904	50	6.597	52
Switzerland	Europe	4.125	32	4.432	17	14.080	49	13.968	53	7.328	39	7.149	37
Ukraine	Europe	4.139	28	4.192	43	16.376	28	16.936	26	7.479	34	7.562	28
United Kingdom	Europe	---	---	4.336	27	13.535	51	14.921	47	9.569	1	6.964	43
Iran	M.E.	4.043	42	4.361	25	18.002	5	18.435	10	8.515	7	8.107	13
Iraq	M.E.	4.288	8	4.126	47	15.893	35	18.273	14	8.294	14	8.019	17
Jordan	M.E.	4.448	3	4.529	8	18.242	4	19.214	1	8.453	9	8.322	7
Turkey	M.E.	4.263	12	4.474	13	---	---	18.378	13	8.076	22	7.943	21
Canada	N.America	4.244	15	4.419	19	15.026	42	15.624	41	7.768	29	7.484	30
United States	N.America	4.249	14	4.320	28	15.723	37	15.752	39	8.176	17	7.613	25
Australia	Oceania	4.156	27	4.387	22	14.810	46	14.421	51	7.291	41	6.865	45
New Zealand	Oceania	4.083	35	4.388	21	14.667	48	14.982	46	7.174	44	6.880	44
Argentina	S.America	3.776	51	3.939	54	15.977	33	15.859	37	7.885	27	7.400	31
Brazil	S.America	4.200	21	4.251	35	16.936	15	17.078	25	8.329	13	8.050	16
Chile	S.America	4.164	26	4.240	37	16.473	26	16.188	36	8.046	23	7.516	29
Colombia	S.America	3.963	48	4.218	40	16.843	19	17.751	19	8.341	12	8.110	12
Mexico	S.America	4.031	44	4.190	45	16.547	25	16.681	31	8.215	16	7.983	18
Peru	S.America	3.933	50	3.939	53	16.913	17	17.344	23	8.293	15	7.903	22
Uruguay	S.America	4.061	39	4.200	42	15.473	39	15.239	43	7.338	37	6.994	40
AVE.		4.172		4.341		16.287		16.790		7.811		7.549	
StDEV.		0.161		0.217		1.261		1.547		0.645		0.622	

Country	Region	Norms for Law and Discipline				Happiness from a Calm Society				Motivation to Participate in Political Activities			
		1990s		2000s		1990s		2000s		1990s		2000s	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Algeria	Africa	17.270	32	15.796	52	7.327	35	8.051	37	3.404	26	3.354	25

Egypt	Africa	17.918	7	17.553	15	7.169	39	7.712	49	3.486	21	2.897	50
Morocco	Africa	17.954	5	17.666	7	7.341	34	7.745	48	3.320	34	3.178	40
Nigeria	Africa	17.444	26	17.165	32	7.658	22	7.976	39	3.338	32	3.271	33
South Africa	Africa	17.331	30	15.981	51	7.419	32	8.250	28	3.480	22	3.418	22
Zimbabwe	Africa	17.946	6	17.023	37	6.571	53	7.833	44	3.247	41	3.314	28
China	Asia	17.808	8	16.995	38	7.672	20	8.228	31	---	---	3.239	35
India	Asia	17.563	18	17.199	31	7.349	33	8.005	38	3.609	14	3.465	18
Indonesia	Asia	17.373	28	17.734	5	7.782	15	8.256	26	3.154	46	3.226	37
Japan	Asia	17.753	9	17.824	4	7.625	23	8.252	27	3.801	10	3.570	16
Pakistan	Asia	18.142	2	17.561	14	6.908	45	8.490	12	3.016	49	3.312	29
Philippines	Asia	16.123	49	15.348	53	7.665	21	8.395	18	3.121	48	3.085	44
Singapore	Asia	17.242	33	16.660	45	7.880	12	8.288	23	3.137	47	---	---
South Korea	Asia	17.537	19	17.216	29	7.493	30	8.092	36	3.824	9	3.671	12
Taiwan	Asia	17.496	20	17.261	26	7.622	24	8.222	33	3.260	39	3.161	42
Viet Nam	Asia	17.961	4	17.516	16	7.584	25	8.332	21	3.182	45	2.992	48
Armenia	Europe	16.438	46	17.636	9	6.736	49	7.519	53	3.515	18	3.019	46
Azerbaijan	Europe	16.546	44	17.967	1	7.141	42	8.153	34	3.195	43	2.862	51
Belarus	Europe	16.450	45	16.547	47	6.728	50	7.784	46	3.295	37	---	---
Bulgaria	Europe	17.461	24	17.253	27	6.850	46	7.528	52	3.303	36	3.239	36
Estonia	Europe	17.103	35	17.026	36	6.979	43	7.958	41	3.453	25	3.279	32
Finland	Europe	17.466	23	17.420	18	8.069	6	8.644	5	3.710	12	3.753	11
France	Europe	---	---	16.709	44	---	---	8.223	32	---	---	3.972	8
Georgia	Europe	17.013	38	17.825	3	6.808	47	7.487	54	3.192	44	3.201	38
Germany	Europe	17.018	36	17.484	17	7.765	16	8.354	19	3.976	6	3.788	10
Hungary	Europe	16.283	48	17.239	28	7.323	36	7.808	45	3.499	19	3.067	45
Kyrgyzstan	Europe	16.977	39	16.728	43	7.575	26	8.281	24	3.216	42	2.999	47
Moldova	Europe	16.106	50	16.378	49	6.678	51	7.690	50	3.260	40	3.320	27
Norway	Europe	17.638	14	17.411	19	8.030	7	8.707	4	4.035	4	4.059	3
Poland	Europe	17.495	21	17.285	25	7.463	31	8.230	30	3.373	29	3.416	23
Romania	Europe	17.418	27	17.590	11	6.932	44	7.959	40	3.471	24	3.169	41
Russian Federation	Europe	16.885	41	16.529	48	6.761	48	7.890	42	3.350	30	3.186	39
Serbia	Europe	17.452	25	14.840	54	7.166	40	7.858	43	3.530	16	3.668	13
Slovenia	Europe	16.851	42	17.134	33	7.557	28	8.397	17	3.550	15	3.546	17
Spain	Europe	17.577	17	17.403	20	7.697	19	8.267	25	3.497	20	3.645	14
Sweden	Europe	17.194	34	17.212	30	8.029	8	8.577	8	4.171	2	4.131	1
Switzerland	Europe	17.322	31	17.684	6	8.187	3	8.710	3	3.774	11	4.028	4
Ukraine	Europe	16.428	47	16.579	46	6.577	52	7.781	47	3.342	31	3.126	43
United Kingdom	Europe	---	---	17.326	23	8.604	1	8.498	11	4.372	1	3.880	9
Iran	M.E.	17.654	13	16.918	39	7.558	27	8.094	35	---	---	---	---
Iraq	M.E.	21.943	1	17.117	34	7.160	41	7.530	51	---	---	3.352	26
Jordan	M.E.	18.053	3	17.653	8	7.239	38	8.232	29	2.935	50	2.932	49
Turkey	M.E.	---	---	17.895	2	7.313	37	8.399	16	3.381	28	3.268	34
Canada	N.America	17.579	16	17.570	12	8.095	5	8.593	6	3.929	8	3.978	7
United States	N.America	17.664	12	17.397	21	8.011	10	8.405	15	3.984	5	3.986	6
Australia	Oceania	17.717	11	17.610	10	7.974	11	8.422	14	3.967	7	4.027	5
New Zealand	Oceania	17.587	15	17.561	13	8.023	9	8.591	7	4.120	3	4.088	2
Argentina	S.America	17.489	22	17.072	35	7.755	18	8.507	10	3.314	35	3.457	20

Brazil	S.America	15.973	51	16.773	41	7.785	14	8.515	9	3.691	13	3.609	15
Chile	S.America	16.916	40	16.830	40	7.758	17	8.349	20	3.289	38	3.299	31
Colombia	S.America	17.334	29	17.316	24	8.332	2	8.763	2	3.472	23	3.435	21
Mexico	S.America	16.579	43	16.165	50	8.132	4	8.803	1	3.385	27	3.354	24
Peru	S.America	17.016	37	16.744	42	7.515	29	8.288	22	3.516	17	3.463	19
Uruguay	S.America	17.727	10	17.386	22	7.869	13	8.484	13	3.323	33	3.299	30
AVE.		17.357		17.106		7.495		8.193		3.495		3.432	
StDEV.		0.848		0.626		0.485		0.344		0.318		0.345	

5. Conclusion

This study measures national character in 53 countries, for internationally comparing the characteristics of financial information prepared in accordance with IFRS. Previous studies have examined what kind of and how national character influences the development of accounting systems in different countries. Many studies refer to Hofstede's cross-cultural surveys to measure national character. However, the questions and their answers of a series of Hofstede's research were surveyed in the late of 1960s and early 1970s and have not been not upgraded data. Based on the WVS survey conducted in the 1990s and 2000s, six elements were proposed and measured as components of national character. This study evaluates that the components of national character are changing over time. This study finds the following.

The six factors of national character relate to the concepts of trust, norms and networks which constitute social capital. Trust was explained as "trust in the social systems" and "happiness from a calm society ". The norms were explained as "norms for life and sex", "religious spirits" and "norms for law and discipline". The network was described as "motivation to political activities".

The measurements of these components varied among different countries, and no single country exhibited consistently high or low values for all measurements. Also, the measurements of factors of national character significantly changed their ranks from the 1990s to the 2000s in many countries. Distinctive patterns in the measurements and their changes were observed within each region.

Specifically, "trust in the social systems" is high in Asian countries and Nordic countries, and low in South America and Eastern European countries. "Norms for life and sex" are high in the Middle East, Asian countries, and African countries, and low in European countries, including the Nordic countries, and Oceania. "Religious spirits" is high in African countries and Asian countries, and low in European countries including East Asian countries and Northern European countries. "Norms for law and discipline" is high in countries such as Japan, Morocco, Jordan, Australia, Pakistan, Egypt, and Vietnam, however regional characteristics are not found, and low in the former Soviet Union countries. "Norms for law and discipline" is high in countries such as Japan, Morocco, Jordan, Australia, Pakistan, Egypt, and Vietnam, however regional characteristics are not found, and low in the former Soviet Union countries. "Happiness from a calm society" is high in European countries including South America and Northern Europe, Oceania, and North America, and low in the former Soviet Union countries. "Motivation to political activities" was high in European countries including the Nordic countries, Oceania countries, and North American countries, and low in the former Soviet Union countries and Asian countries.

Comparing the 1990s and 2000s, the measurements of "trust in social systems", "norms for life and sex", and "happiness from a calm society" are increasing, however measurements of "religious spirits", "norms for law and discipline", and "motivation to political activities" are declining.

The rank of "trust in social systems" varied greatly in many countries. Especially in the former Soviet Union countries, there was a mixture of countries with a large increase in rank, such as Kyrgyz, and countries with a large decrease in rank. In the "norms for life and sex," former Soviet Union countries have risen in rank, and African and South American countries have fallen in rank. With regard to "religious spirits", the ranks of Eastern European countries, including the former Soviet Union countries, rose, but Britain fell significantly in both measurements and ranks. In the "norms for law and discipline", European countries such as Eastern European countries including

the former Soviet Union countries are ranked higher, and Asian countries and African countries are ranked lower. Relating to "happiness from a calm society," the measurements and ranks of Pakistan have significantly increased. The former Soviet Union countries had low measurements and ranks in both the 1990s and 2000s. With regard to "motivation to political activities", Egypt fell sharply in both measurements and ranks, and Eastern European countries including the former Soviet Union countries also declined.

By comparing the 1990s and the 2000s, the results of measurements show that each factor of national character change with the times. This finds that the measurements of national character used in previous studies may not always adequately represent the current situation in each country. This research will provide new measurement values for international comparative research considering national character, and will contribute to obtaining more accurate analysis results. On the other hand, this study does not consider the causes of changes in the components of national character. The causes of changes in each component are thought to be related to the economic and social environment of each country, so further study is necessary.

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Notes

[i]) See, for example, Guan et al. (2005); Kwok & Tadesse (2006); Nabar & Boonlert-U-Thai (2007); Han et al. (2010); Hashim (2012); McGuire et al. (2012); Riahi & Omri (2013); Gray et al. (2013); Gray et al. (2015); Ugrin et al. (2017); Góis et al. (2018); Gupta et al. (2018).

[ii]) With respect to Yugoslavia, there has been no subsidiaries of IBM Corporation since World War II, thus the survey result is based on the research by IBM's consulting company in Yugoslavia.

[iii]) CVS is a survey of students in 23 countries. The measurement of "long-term versus short-term orientation" uses data from 18 of the 23 countries surveyed by CVS that were included in Hofstede (1980).

[iv]) The EMMS survey covered 15 European countries. The measurement of "long-term and short-term orientation" uses data from 11 of the 15 countries surveyed by the EMMS that were not covered by the CVS but were included in Hofstede (1980).

[v]) The 78 countries include the East and West regions of Africa, the French-speaking divisions of Canada, the French-speaking and German-speaking divisions of Belgium and Switzerland, and the East German district.

[vi]) The 96 countries include the East and West regions of Africa, as well as the East German district.

[vii]) These cultural dimensions are measured by dividing the questions into Society and Organization, as well as into Practices and Values, respectively.

[viii]) The Cabinet Office National Life Bureau publishes research papers on the development of social capital and economics, society, etc. (Cabinet Office National Life Bureau (2003)).

[ix]) Topics other than religion and national identity include the role of government, social networks, social inequality, family and gender roles, work orientation, the environment, citizenship, leisure and sports, and health and health care. For more information, please refer to the ISSP website (http://www.issp.org/menu-top/home/).

[x]) Germany was unified in 1990, but it was divided into East Germany and West Germany in the survey.

[xi]) Hong Kong was returned to China in 1997, but it was surveyed as an independent country.

[xii]) Factor analysis is also performed by the Principal Factor Analysis.

[xiii]) Promax method is also tried for factor analysis.