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Measuring National Character Toward Developing A Research Method for International Accounting Studies

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Abstract

This study measures national character in seven developed countries, based on social capital concept. Evaluating national character in developed countries help cross-country study on accounting system. The measurements of national character use data of the World Values Surveys (WVS) conducted by the World Values Surveys Association. The WVS is a questionnaire survey that uses a random sampling method with multiple precoded selections. Compared to other social capital surveys, this survey makes better measurement of national character because it includes numerous questions in a wide range of fields and focuses on many people in diverse countries. Factor analysis of the WVS data identifies three factors of social capital concept. These three factors are consistent with the components of social capital concept proposed in previous studies. Structural equation model finds the coefficients for measuring national character, and regression analysis measures three indexes of national character of each country. The findings are as follows. Social capital consists of three factors such as social trust, religious social norms, and political networks. The measures of these three factors are the lowest in Japan, followed by France, the United States, Germany, Canada, and Australia, in increasing order. In developed countries, religious social norms measures are negative and low, and the effect of political networks on national character is relatively low. This study implies that differences in national character affect various national institutions and systems. This study has significant implications for both regulators and financial markets.

Keywords: International Accounting, International Financial Reporting Standards, National Character, Research Method, Social Capital

1. Introduction

This study develops a research method to provide measurements of national character for international comparative research on the decision usefulness of financial information prepared in accordance with the International Financial Reporting Standards (IFRS).

The field of data science emphasizes the consequences of diverse cultures, ethnicities, and religions in international comparative research (Yoshino & Hayashi, 2002; Jowell, Roberts, Fitzgerald, & Eva, 2007; Fujita

& Yoshino, 2009; Yoshino, Shibai, Nikaido, & Fujita, 2015). Data on diverse cultures, ethnicities, and religions help explain social phenomena by identifying national character in each country. It is important to evaluate national character when studying accounting systems, because humans carry out business operations and accounting practices. In international accounting research on the decision usefulness of financial information, evaluating national character aids in understanding the features of financial information that reflect business activities (Gray, 1988; Douppnik & Salter, 1995; Zarzeski, 1996). Several prior international accounting studies find that national character can affect a country's accounting system including the accounting information it produces.

Previous studies examine the impact of societal values on accounting information in different countries, based on the results of Hofstede's surveys on cultural dimensions. A series of Hofstede's surveys are famous for revealing differences in societal values among countries. However, test results find different effects of each societal value on accounting information in each study. This inconsistency is likely due to the different objects and periods of analyses among previous studies, as well as changes in the cultural characteristics of each country as the environmental changes over time. Such problems reveal the need for new measurements of national character using data other than Hofstede's research.

Some recent comparative accounting studies use social capital concept. Social capital is initially derived from social theory, and from the broad idea that social relationships are resources that help people act effectively. Prior studies define social capital as the features of social organizations, such as trust, norms, and networks, that can improve society's efficiency by facilitating coordinated actions. Various institutions and organizations continue to investigate and analyze social capital. However, they descriptively examine the social capital of each country and do not measure it numerically. As the result, some previous studies measure a component of social capital by simply using the average of answers to a single question in those surveys. No studies examine the effects on accounting information of all three factors of social capital measured using a systematic model.

The purpose of this study is to measure national character in developed countries. National character is clearly different between developed and developing countries, but may be similar among developed countries. However, this research focuses on developed countries, as this evaluation of national character is intended for use in international accounting studies on the application of IFRS. The measurement of national character developed in this study uses data from the World Values Surveys (WVS) conducted by the World Values Surveys Association (WVSA). Factor analysis of the answers to these questionnaires reveals three factors of social capital concept. Structural equation model (SEM) finds the relationship among the question items, and regression analysis measures national character using the relationship to each factor.

The remainder of this paper proceeds as follows. Section 2 discusses prior research. First reviews the surveys relating to research of national character focusing on culture, and next reviews accounting literature that examines the effects of cultural dimensions on financial information. Section 3 discusses the materials and the method for measuring national character. Section 4 shows the descriptive statistics for adjusted data of answers and the results of measuring national character of each country. Finally, Section 5 presents conclusions and discusses their implications.

2. Prior Literature

2.1. Surveys of Cultural Dimensions

National character is an important concept in anthropology for considering socio-cultural systems (Benedict, 1934; Kardiner, 1939; Linton, 1945). Despite the importance of this concept, there are few definitions of national character. Inkeles (1997) defines national character as those characteristics that are common or have been standardized in a given society. This concept aids in understanding the causes and consequences of different social structures and cultural arrangements.

Hofstede (1980) explores the differences in thinking and social action among national populations in 40 countries. The data compile questionnaire survey results from more than 116,000 employees of a multinational firm, Hermes (IBM) Co., during 1967-1973. Hofstede (1980) presents the theoretical reasoning, base data, and statistical treatments used to arrive at the conclusions. The study measures national culture based on four societal values: power distance, uncertainty avoidance, individualism and collectivism, and masculinity and femininity. The index of power distance is calculated using the answers to three questions, while the individualism and masculinity measures are based on responses to 14 questions related to work goals. Hofstede (1980) performs factor analysis using the average of question answers, and develops equations with scores between 0 and 100 using factor loadings for the first and second factors.

Hofstede (2001) expands the survey coverage to 50 countries, and introduces a fifth societal value (long- versus short-term orientation) to the four social values in Hofstede (1980). The survey data for the new dimension uses the answers of the Chinese Value Survey in 23 countries around 1985 and the results of the European Media and Marketing Survey in 11 countries. Hofstede, Hofstede, & Minkov (2010) incorporate a sixth societal value (indulgence versus restraint). Hofstede et al. (2010) conduct a survey in 76 countries for the four social values of Hofstede (1980) and a survey in 96 countries for the other two social values. The new surveys use the WVS data.

Hofstede's surveys describe the organization's dependence on culture. Hofstede (2001) and Hofstede et al. (2010) describe various validations of the country scores, provided by the WVS and the Global Leadership and Organizational Behavior Effectiveness (GLOBE). However, measuring societal values presents some issues. For example, Hofstede (2001) and Hofstede et al. (2010) do not upgrade the data used to identify the four societal values from Hofstede (1980). The object and method of the surveys on the two societal values added in Hofstede (2001) and Hofstede et al. (2010) differ from the four societal values in the initial survey of Hofstede (1980). Hofstede (1980) surveys employees of IBM whereas Hofstede (2001) and Hofstede et al. (2010) data are collected from other populations.

In addition to Hofstede's surveys, GLOBE conducts cross-cultural research related to organizations and culture and publishes several surveys, such as House et al. (2004, 2014) and Chhokar et al. (2008). House et al. (2004) focus on 62 countries and conducts questionnaire surveys about different dimensions, such as practices and values, and different groups such as society and organizations. House et al. (2004) propose nine cultural dimensions and assume that national character is measured on these nine dimensions to explain leadership behavior. The cultural dimensions are performance orientation, assertiveness, future orientation, humane orientation, institutional collectivism, in-group collectivism, gender egalitarianism, power distance, and uncertainty avoidance. Questionnaire items for the nine cultural dimensions are designed to elicit information about social and organizational practices. Respondents rates the items on a 7-point Likert-type scale. Descriptive statistics for answers to the questions include the mean, median, and standard deviation. After qualitative and quantitative analysis of those data, House et al. (2004) show that these nine cultural dimensions are related to the five societal values noted in Hofstede (2001). However, Hofstede et al. (2010) insist that cultural dimensions are not always similar to societal values.

The studies by Hofstede and GLOBE are similar in that both evaluate national character based on culture and find that the national character of each country affects organizational behavior. These studies help to investigate the characteristics of financial information prepared and disclosed by management. However, results of measuring some cultural dimensions, such as uncertainty avoidance and institutional collectivism, conflict with the societal values that Hofstede refers to as uncertainty avoidance and collectivism. Differences in the measurements of the same or similar dimensions cast some doubt on the results of these studies.

2.2. Accounting Studies Using Cultural Dimensions

Harrison & McKinnon (1986) and Gray (1988) are early studies that show culture influences the development of accounting systems. Gray (1988) explores the extent to which cultural factors explain and predict international differences in accounting. Gray (1988) also proposes a theory of cultural influence on the development of

accounting systems by international comparisons based on the societal values identified in Hofstede (1980; 1984). Many researchers have empirically analyzed Gray's (1988) theoretical model.

Zarzeski (1996) and Hope (2003) investigate the impact of national cultures on the disclosure level of financial information. Using the four societal values of Hofstede (1980), Zarzeski (1996) analyzes whether differences in culture present obstacle to the international harmonization of accounting standards. Zarzeski (1996) finds that a culture's secretiveness has a significant impact on disclosure practices, however, higher overseas sales ratios, lower debt ratios, and larger firms appear to disclose more information than dictated by their local culture. Hope (2003) examines how national cultures, legal systems, and company characteristics affect the disclosure level of financial information. Hope (2003) shows that culture is an important factor that affects financial reporting systems. However, the extent to which cultural values impact the level of financial reporting varies for different legal systems. Hope's (2003) results show that the impact of uncertainty avoidance and individualism on disclosure level are different depending on a country's legal system, such as code law and common law. Moreover, the sign of the coefficients of power distance and masculinity also differ from Zarzeski's (1996) results.

In the 2000s, international comparative studies focus on how differences in societal values among countries affect earnings information in different countries. Nabar & Boonlert-U-Thai (2007) examine the relationship between cultural values and earnings management. Their results show that earnings management is relatively high in countries with high uncertainty avoidance scores, and earnings discretion is high in countries with high uncertainty avoidance and masculinity scores. Han, Kang, Salter, & Yoo (2010) investigate whether earnings discretion relates to cultural value as well as the institutional features of their country. The results of tests present that uncertainty avoidance and individualism dimensions of national culture explain the earnings discretion of management across countries, and that this association changes with the strength of investor protection. Gray, Kang, Lin, & Tang (2015) examine whether the mandatory adoption of IFRS in the EU restricts the results of previous studies on the relationship between national culture and earnings management. The findings show that the tendency to engage in earnings management continues post-IFRS and cultural factors remain influential in explaining differences in the magnitude of earnings management behavior across countries.

Many prior studies have examined the possible impact on accounting systems of cross-country differences in culture using Hofstede's indexes. These studies have found that development of national systems tends to be a function of environmental factors. Table 1 summarizes the results of previous research. The research results are not entirely consistent. This inconsistency occurs because the data on societal values face significant limitations, and the countries and periods covered by previous studies differ. Riahi & Omri (2013) examine the impact of cultural values measured by macro- and micro-economic data on earnings management. Riahi & Omri (2013) use different indexes to individually measure the five dimensions of Hofstede (2001) as cultural values. Their findings show that Hofstede's five cultural dimensions define national culture in different countries. However, the numbers that represent the cultural values of each country change from those of Hofstede's indicators over time. This result shows the need for national character measurements other than Hofstede's indexes.

Table 1. Effects of Societal Values

Articles	Purpose	Objects	UA	ID	MA	PD
Zarzeski (1996)	Disclosure Level		-	+	+	-
Hope (2003)	Disclosure Level	All Countries	-	+	-	+
Hope (2003)	Disclosure Level	Code Law	+	+	-	+
Hope (2003)	Disclosure Level	Common Law	-	-	+	-
Nabar & Boonlert-U-Thai (2007)	Earnings Management		+			
Nabar & Boonlert-U-Thai (2007)	Earnings Discretion		+		+	
Han, Kang, Salter, & Yoo (2010)	Earnings Discretion		-	+		
Gray, Kang, Lin, & Tang (2015)	Earnings Discretion		+			
Riahi & Omri (2013)	Earnings Management		+	-		-

Note. UA: Uncertainty Avoidance, ID: Individualism, MA: Masculinity, PD: Power Distance.

3. Materials and Method

3.1. *Surveys of Social Capital*

Other studies have evaluated national character using the concept of social capital that 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 define social capital differently. 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) proposes two types of trust: thick trust and social trust. Thick trust refers to beliefs that result from intimate familiarity with an individual, while social trust refers to a general trust relationship with other members of society in a wider area. Social trust helps to develop a social capital of the area because it creates broader cooperation with other area members. Social trust in complex environments can come from relevant sources such as norms of reciprocity and networks of citizen participation.

Putnam (1993) especially emphasizes norms of reciprocity. Reciprocity norms are interdependent exchanges that are divided into balanced reciprocity and generalized reciprocity. Balanced reciprocity norms are exchanges of equivalent items at the same time. By contrast, generalized reciprocity norms are currently unbalanced exchanges where a sustained relationship of exchanges is based on the mutual expectation that equilibrium will be achieved in the future. Generalized reciprocity norms are based on altruism in the sense that the relationship may provide utility to the other party in the short term, but in the long-term selfishness will increase the utility of all parties. As a result, both types of reciprocity are extremely productive components that create social capital.

Putnam (1993) classifies citizen participation networks into horizontal and vertical networks. Horizontal networks represent the breadth of the daily contact and interaction of individuals. Vertical networks are related to the degree of belonging to the area and organization, such as community activities and the formation status of various organizations. Vertical networks are less reliable than horizontal networks, because subordinates dislike being overly exploited and defend themselves by not disclosing too much information.

The concept of social capital has recently received considerable attention from sociologists, economists, and political scientists as part of the debate on national development and organizational behavior¹. At the same time, various institutions and organizations, such as the Organization for Economic Co-operation and Development (OECD), World Bank, International Social Survey Program (ISSP), and WVSA, continue to investigate and analyze social capital.

The OECD investigates the impact of social capital on sustainable economic and social development (Healy & Cote, 2001; Scrivens & Smith, 2013). Scrivens & Smith (2013) propose a questionnaire to identify social capital in different countries based on four interpretations– personal relationship, social network support, civic engagement, and trust and cooperative norms– but have not measured social capital.

The World Bank works on social capital research to end extreme poverty in a generation and promote shared prosperity under sustainable growth (Grootaert, 1998; Woolcock, 1998; Woolcock & Narayan, 2000; Grootaert & Van Bastelaer, 2001, 2002; Grootaert & Narayan, 2004). It analyzes the relationship between social capital and economic disparities using quantitative and qualitative analysis methods. Grootaert & van Bastelaer (2002) propose the SOCAT (Social Capital Assessment Tool), which consists of three instruments for household surveys, community profiles, and organizational profiles, as an evaluation tool. Grootaert & Narayan (2004) develop the SC-IQ (Integrated Questionnaire for the Measurement of Social Capital) as a social capital

¹ In Japan, the Cabinet Office held the international conference on social capital in 2003. At the conference, Reino Hjerpe of Finland's Government Institute for Economic Research gave a keynote speech on the relationship between social capital and economic growth (Hjerpe, 2003). The Cabinet Office National Life Bureau also published a report (The Cabinet Office, National Life Bureau, 2003).

evaluation tool focused on household survey in developing countries. This measures social capital by dividing the questionnaire into the six dimensions of groups and networks, trust and solidarity, collective action and cooperation, information and communication, social cohesion and inclusion, and empowerment and political action. The World Bank has conducted pilot tests using these evaluation tools, but has not released measurement results for many countries in the world.

The ISSP² is an international program jointly established by Australia, Germany, the UK, and the US. Currently, 57 countries have joined the ISSP to conduct basic research and studies on important topics in social sciences such as religion, national identity, the role of government, social networks, social inequality, family and changing gender roles, work orientations, environment, citizenship, leisure time and sports, and health and health care. The ISSP has conducted a questionnaire survey, covering multiple topics over several years.

The WVSA is a worldwide organization composed of sociologists. The WVSA conducts WVS with the aim of investigating changes in people's consciousness in various countries and how these changes impact social, cultural, and political activities. The first survey (Wave 1) begins in 1981 and the seventh survey (Wave 7) is under way at the time of the present study. The survey involves over 100 target countries and more than 400,000 respondents. WVS is superior to other surveys in terms of the number of target countries, scope of the topics, and number of questions. Table 2 shows the summary of the WVS from Wave 1 to Wave 7. Table 3 presents the Label of Questionnaires in Wave6. The WVSA conducts its questionnaire survey mainly using random sampling with precoded multiple selections. This survey is superior to measure national character because it includes numerous questions in a wide range of fields and focuses on many people in diverse countries, compared to other surveys on social capital. Hofstede (2001) and Hofstede et al. (2010) use parts of the WVS to measure societal values, and refer to it to verify the results of the GLOBE survey. The WVS more accurately evaluates national character because its evaluation of national character is not solely based on the cultural perspective.

Table 2. Summary of WVS

Wave No.	Survey Years	Countries	Units	Ques.
Wave1	1981-1984	10	13,586	238
Wave2	1990-1994	18	24,558	375
Wave3	1995-1998	53	76,036	238
Wave4	1999-2004	40	57,868	246
Wave5	2005-2009	57	80,950	267
Wave6	2010-2014	60	86,274	262
Wave7	2015-	*	*	*

Note. *) The survey is under way.

Table 3. Label of Questionnaire

No.	Label	No.	Label	No.	Label
001	Perceptions of life	006	Religion and Morale	014	Socio-demographics
002	Environment	007	National Identity	015	Special Indexes
003	Work	008	Security	016	Sylatech module
004	Family	009	Science		
005	Politics and Society	010	Structure of the file		

Nanda & Wysocki (2011) examine the association between trust and firm voluntary and regulated financial reporting and disclosure quality. The samples are firms in 43 countries. The study documents a robust positive relationship between trust and measures of voluntary accounting quality, but no association between trust and

² <http://www.issp.org/menu-top/home/>

regulated reporting requirements. Nanda & Wysocki (2011) measure the trust index from responses to one question in the WVS and Latinbarómetro Survey³. The question is “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”⁴. Based on the responses to this question, the equation used to calculate the trust index is as follow: $100 + (\% \text{ Most people can be trusted}) - (\% \text{ Can't be too careful})$.

It is important to study accounting systems using social capital to evaluate national character because humans carry out business operations and accounting practices. However, there are not many studies on whether social capital influences accounting information. One reason of this is that no research objectively measures social capital using a large-scale dataset.

3.2. Measurements of National Character

This study measures national character based on the social capital concept in seven developed countries. The target countries are Australia, Canada, France, Germany, Japan, the United Kingdom (UK), and the United States (US). Countries other than the US permit or regulate application of IFRS in the preparation of financial statements. The US does not permit applying IFRS to domestic firms. However, the US is the developed country most interested in examining the impact of national character on financial information.

Data for measuring national character is obtained from the WVS. Question items have changed every Wave in response to changes in time and environment. The countries covered by the survey vary in each Wave. Question items answered are also different in each country. The latest completed survey, Wave6, focuses on 60 countries including Australia, Germany, Japan, and the US, but not Canada, France, or the UK. Three countries not surveyed in Wave 6 measure national character using data from Wave 5. There are 267 and 262 question items in Waves 5 and 6. National character is measured using common questions for both Waves 5 and 6 as to be comparable between the measurement results of three countries that use the Wave 5 questionnaire and four countries that use the Wave 6 questionnaire. The number of common question items in Waves 5 and 6 is 185, and the number of question items answered by all seven countries is 126.

The measurement of national character uses adjusted data of answers from the WVS because each question in this survey differs in the Likert scales and response order of the questions. After organizing the order of the answers, differences in the degrees of Licker scales are standardized to the numerical values of the answer results. The adjustments of differences are necessary to ensure consistency in the scales and the weights of responses.

After that, factor analysis of the adjusted data identifies several factors for evaluating national character. Factor analysis uses factor extraction method by principal factor analysis and maximum likelihood method. This analysis reduces the number of questions and helps determine the number of latent variables used in the SEM. The number of factors is selected according to the Kaiser criterion, focusing on each eigenvalue and the cumulative eigenvalues. Based on the answers to the questions on the selected factors, the SEM determines the coefficients for measuring national character, and the regression analysis measures each country's national character.

4. Descriptive Statistics and Results

Table 4 presents the number of respondents in each country. Table 5 presents the results of the factor analysis. Focusing on the eigenvalues and cumulative contributions according to the Kaiser criterion, there are 14 factors. Many question items have small factor loadings for the 14 factors. Therefore, after confirming the contents of the question items, the question items with a small impact on the analysis are deleted. Table 6 shows the results

³ Latinbarómetro Survey is conducted by Latinbarómetro Corporation. It measures the development of democracies, economies, and societies by interviews in 18 Latin American countries that are published in several reports (<http://www.latinobarometro.org/lat.jsp>).

⁴ There are many other questions related to trust in WVS. Trust index needs to calculate using the responses to those questions.

of the factor analysis of the questions after deletion. The number of factors is three, focusing on the eigenvalue and cumulative eigenvalues of each factor, as a result of examining each question items and eigenvalue of them. Based on the contents of the questionnaire, the factors could be described as social trust, religious social norms, and political networks, terms similar to three components of social capital concept.

Table 4. The Number of Respondents

Wave	Wave6	Wave5	Wave5	Wave5	Wave6	Wave6	Wave6
Country	AU	CA	FR	UK	GE	JP	US
No. Units	1,477	2,164	1,001	1,041	2,046	2,443	2,232

Table 5. Factor Analysis (1)

Factor	Eigenvalue	Proportion	Cumulative	Factor	Eigenvalue	Proportion	Cumulative
Factor1	8.328	0.185	0.185	Factor9	1.691	0.038	0.774
Factor2	7.471	0.166	0.350	Factor10	1.523	0.034	0.808
Factor3	4.680	0.104	0.454	Factor11	1.341	0.030	0.838
Factor4	3.460	0.077	0.531	Factor12	1.270	0.028	0.866
Factor5	2.814	0.062	0.593	Factor13	1.129	0.025	0.891
Factor6	2.394	0.053	0.646	Factor14	1.069	0.024	0.914
Factor7	2.261	0.050	0.696	Factor15	0.906	0.020	0.935
Factor8	1.809	0.040	0.737	Factor16 ~ omitted			

Table 6. Factor Analysis (2)

Factor	Eigenvalue	Proportion	Cumulative
Factor1	6.451	0.333	0.333
Factor2	4.807	0.248	0.580
Factor3	2.394	0.123	0.704
Factor4	1.823	0.094	0.798
Factor5	1.555	0.080	0.878
Factor6	1.204	0.062	0.940
Factor7	0.965	0.050	0.990
Factor8 ~ omitted			

The Appendix presents the descriptive statistics for each response related to the measurement of the three factors of social capital. The number of valid responses for each question differs from the number of respondents. Table 7 shows the proportion of non-responders. Japan has the highest percentage of non-responders, while the proportions in France and Germany are relatively low.

The SEM identifies the relation of social capital factors and questions answers after classifying the question items that are detected through factor analysis into three latent variables. Figures 1, 2, and 3 show the path diagrams and the results of analyses by SEM.

Table 7. Proportion of Non-Respondents

	(%)							
Country	AU	CA	FR	UK	GE	JP	US	Ave.
No Ans.	1.943	2.608	1.173	3.781	1.663	10.944	1.674	3.829

Figure 1. Path Diagram for Trust*)

Note. *) 'V' number is the question number in Wave 6.

Figure 2 Path Diagram for Norms*)

Note. *) 'V' number is the question number in Wave 6.

Figure 3 Path Diagram for Networks*)

Note. *) 'V' number is the question number in Wave 6.

Table 8 presents the results of measuring each latent variable based on each country's scores of the answers to the questions to compare the social capital of the seven countries. Among the seven countries, Japan has the lowest figures for social trust, religious social norms and political networks. As a whole, France has the second lowest after Japan, while Canada and Australia have generally high values in the three indexes. The index of religious social norms is negative in all countries, indicating that religious social norms are generally low in economically developed countries.

Table 8. Measures of Social Capital

Wave No.	Wave6	Wave5	Wave5	Wave5	Wave6	Wave6	Wave6
Country	AU	CA	FR	UK	GE	JP	US
Social Trust	0.269	0.307	0.105	0.209	0.238	0.102	0.149
Religious Social Norms	-0.158	-0.029	-0.177	-0.115	-0.176	-0.204	-0.018
Political Networks	0.667	0.683	0.589	0.662	0.564	0.337	0.628

5. Conclusion

This study measures social capital in seven developed 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 influence the development of accounting systems in different countries. Many studies refer to Hofstede's cross-cultural surveys to measure national character. This study assesses the significance of international accounting research that considers cultural dimensions to identify the characteristics of business activities, management behavior, and investor reactions. However, among the results of research using Hofstede's survey scale, there are contradictions in the relationships between cultural dimensions and accounting systems.

Thus, national character is measured using WVS questionnaires, which have numerous questions in a wide range of fields and focus on many people in diverse countries. The results of factor analysis of the WVS data identify three elements of national character of each country, such as social trust, religious social norms, and political networks, that are components of the social capital concept. Then, using the averages of answers of each

question, SEM calculates coefficients of three elements for measuring national character. The regression analysis measures national character of seven developed countries from three factors.

The measurement results of three factors highlight the characteristics of each country's national character. Overall, all indexes of national character are the lowest in Japan. Canada and Australia show higher indexes than the other countries. Among the three factors, the indexes of religious social norms are negative in all countries. Also, the indexes of political networks have low impacts on national character measurements, because the coefficient of the political networks index is relatively low. Trust is an important factor in the development of a social capital. Trust has two aspects of thick trust and social trust. Social trust refers to general trust of other members of society, however thick trust relates to intimate familiarity with an individual. Japanese people are prudent in wide range human relations, except with familiar people. On the other hand, people in Canada and Australia are friendly with various people and society as a whole. Norms include both balanced reciprocity and generalized reciprocity. The negative number of religious social norms shows that reciprocity is comparatively low in developed countries. This result indicates that many people in developed countries are not altruistic in the long term, but are in the short term. Networks represents citizen participation in society. The political networks index demonstrates a vertical relationship with society. The effect of political networks on national character is relatively low and, in developed countries, political networks do not make much difference in the measurement of national character.

This study focuses on only seven developed countries. The measurement of national character should be expanded to many more target countries. However, in the case of international comparisons of the characteristics of financial information prepared in accordance with IFRS, similarity in firm size is a significant factor in decision making of information users. If the measurement focuses on more countries, differences in national character among developed countries may be ambiguous, however differences between developed countries and developing countries may be more apparent. In the future, an international comparative analysis that uses measures of national character may identify the characteristics of financial information prepared in accordance with IFRS. Measuring national character in developed countries contributes to providing the data to examine the usefulness of information for user's decision making. Thus, this study has significant implication for both regulators and financial markets.

References

- Benedict, R. T. (1934). *Patterns of Culture*. Massachusetts: Houghton Mifflin Harcourt.
- Cabinet Office National Life Bureau. (2003). *Social Capital: In Search for a Virtuous Circle of Rich Human Relations and Civil Activities*. Cabinet Office (Japan).
- Chhokar, J. S., Brodbeck, F. C., & House, R. J. (Ed.). (2008). *Culture and Leadership Across the World: The GLOBE Book of In-Depth Studies of 25 Societies*. New Jersey: Lawrence Erlbaum Associates.
- Dasgupta, P., & Serageldin, I. (1999). *Social Capital: A Multifaceted Perspective*. Washington DC: The World Bank.
- Doupnik, T. S., & Salter, S. B. (1995). External Environment, Culture, and Accounting Practice: A Preliminary Test of a General Model of International Accounting Development. *The International Journal of Accounting*, 30, 189–207.
- Fujita, T., & Yoshino, R. (2009). Social Values on International Relationships in the Asia-Pacific Region. *Behaviormetrika*, 36(2), 149–166.
- Gray, S. J. (1988). Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally. *Abacus*, 24, 1–15.
- Gray, S. J., Kang, T., Lin, Z., & Tang, Q. (2015). Earnings Management in Europe Post IFRS: Do Culture Influences Persist? *Management International Review*, 55, 827–856.
- Grootaert, C. (1998). Social Capital: The Missing Link? *Social Capital Initiative Working Paper* (3). Washington, DC: The World Bank.
- Grootaert, C., & Van Bastelaer, T. (2001). Understanding and Measuring Social Capital: A Synthesis of Findings and Recommendations from the Social Capital Initiative. *Social Capital Initiative Working Paper* (24). Washington, DC: The World Bank.
- Grootaert, C., & Van Bastelaer, T. ed. (2002). *Understanding and Measuring Social Capital: A Multidisciplinary Tool for Practitioners*. Directions in Development. Washington, DC: The World Bank.
- Grootaert, C., & Narayan, D. (2004). Measuring Social Capital: An Integrated Questionnaire. *World Bank Working Paper* (16). Washington, DC: The World Bank.

- Han, S., Kang, T., Salter, S., & Yoo, Y. K. (2010). A Cross-country Study on the Effects of National Culture on Earnings Management. *Journal of International Business Studies*, 41, 123–141.
- Harrison, G. L., & McKinnon, J. L. (1986). Culture and Accounting Change: A New Perspective on Corporate Reporting Regulation and Accounting Policy Formulation. *Accounting, Organizations and Society*, 11, 233–252.
- Healy, T., & Cote, S. (2001). *The Well-being of Nations: The Role of Human and Social Capital*. Paris: OECD.
- Hjerpe, R. (2003, March). *Social Capital and Economic Growth*. Paper presented at the International Conference on Social Capital Organized by Economic and Social Research Institute of the Cabinet Office of the Japanese Government, Tokyo.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*. California: SAGE.
- Hofstede, G. (1984). *Culture's Consequences: International Differences in Work-Related Values* (Abridged Edition). California: SAGE.
- Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations* (2nd ed.). California: SAGE.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind*. New York: McGraw-Hill Education.
- Hope, Ole-Kristian. (2003). Firm-level Disclosures and the Relative Roles of Culture and Legal Origin. *Journal of International Financial Management and Accounting*, 14, 218–248.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Ed.). (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. California: SAGE.
- House, R. J., Dorfman, P. W., Javidan, M., Hanges, P. J., & Sully de Luque, M. F. (2014). *Strategic Leadership Across Cultures: The GLOBE Study of CEO Leadership Behavior and Effectiveness in 24 Countries*. California: SAGE.
- Inkeles, A. (1997). *National Character*. New Jersey: Transaction Publishers.
- Jowell, R., Roberts, C., Fitzgerald, R., & Eva, G. (Eds.). (2007). *Measuring Attitudes Cross-Nationally: Lessons from the European Social Survey*. California: SAGE.
- Kardiner, A. (1939). *The Individual and His Society*. New York: Columbia University Press.
- Linton, R. (1945). *The Science of Man in the World Crisis*. New York: Columbia University Press.
- Nabar, S., & Boonlert-U-Thai, K. K. (2007). Earnings Management, Investor Protection, and National Culture. *Journal of International Accounting Research*, 6(2), 35–54.
- Nanda, D., & Wsocki, P. (2011). The Relation between Trust and Accounting Quality. *Working Paper*.
- Putnam, R. D. (1993). *Making Democracy Work*. New Jersey: Princeton University Press.
- Riahi, R., & Omri, A. (2013). Cultural Relativism in Earnings Management. *International Journal of Business Research*, 3(3), 281–295.
- Scrivens, K., & Smith, C. (2013). Four Interpretations of Social Capital: An Agenda for Measurement. *OECD Statistics Working Papers*. Paris: OECD.
- Woolcock, M. (1998). Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework. *Theory and Society*, 27, 151–208.
- Woolcock, M., & Narayan, D. (2000). Social Capital: Implications for Development Theory, Research, and Policy. *The World Bank Research Observer*, 15(2), 225–249.
- Yoshino, R., & Hayashi, C. (2002). An Overview of Cultural Link Analysis of National Character. *Behaviormetrika*, 29(2), 125–142.
- Yoshino, R., Shibai, K., Nikaido, K., & Fujita, T. (2015). The Asia-Pacific Values Survey 2010-2014: Cultural Manifold Analysis of National Character. *Behaviormetrika*, 42(2), 99–129.
- Zarzeski, M. T. (1996). Spontaneous Harmonization Effects of Culture and Market Forces on Accounting Disclosure Practices. *Accounting Horizons*, 10, 18–37.

Appendix. Descriptive Statistics for Responses

Factor SC*)	Wave6	AU			GE			JP			US		
	Ques. No.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.
TRU	V10	1,464	0.379	0.277	2,028	0.278	0.302	2,366	0.337	0.307	2,220	0.360	0.302
TRU	V23	1,462	0.296	0.311	2,043	0.297	0.300	2,381	0.222	0.311	2,216	0.305	0.293
TRU	V24	1,466	0.063	0.705	2,017	-0.106	0.699	2,265	-0.159	0.689	2,211	-0.167	0.687
TRU	V55	1,459	0.362	0.302	2,037	0.231	0.326	2,296	0.040	0.314	2,202	0.355	0.279
TRU	V56	1,452	0.161	0.369	2,027	0.022	0.327	2,227	-0.039	0.325	2,205	0.048	0.354
TRU	V59	1,459	0.175	0.375	2,025	0.165	0.367	2,296	0.084	0.354	2,216	0.126	0.377
TRU	V74	1,448	0.223	0.341	2,032	0.220	0.331	2,296	-0.094	0.316	2,184	0.218	0.323
TRU	V102	1,461	0.618	0.202	2,029	0.586	0.249	2,394	0.579	0.223	2,209	0.554	0.272
TRU	V103	1,436	0.171	0.267	2,034	0.171	0.332	2,222	0.049	0.310	2,199	0.144	0.313
TRU	V104	1,434	0.418	0.269	2,037	0.277	0.262	2,341	0.213	0.266	2,200	0.353	0.286
TRU	V109	1,449	0.316	0.320	1,983	0.098	0.357	2,157	0.176	0.316	2,194	0.324	0.365
TRU	V113	1,452	0.293	0.324	2,025	0.239	0.329	2,299	0.144	0.324	2,195	0.168	0.365
TRU	V114	1,440	0.095	0.374	1,993	0.136	0.362	2,189	0.228	0.299	2,188	0.045	0.348
TRU	V115	1,448	-0.157	0.367	2,001	-0.053	0.353	2,166	-0.176	0.321	2,187	-0.133	0.346
TRU	V116	1,446	-0.281	0.297	1,982	-0.206	0.331	2,110	-0.243	0.300	2,188	-0.276	0.281
TRU	V117	1,439	-0.142	0.364	1,978	-0.066	0.345	2,121	-0.205	0.315	2,170	-0.236	0.317
TRU	V118	1,441	-0.036	0.327	2,002	0.023	0.320	2,105	-0.108	0.318	2,182	-0.025	0.321
TRU	V120	1,434	-0.018	0.331	1,958	-0.211	0.348	1,953	0.010	0.301	2,178	-0.108	0.313
TRU	V122	1,442	0.045	0.365	1,986	0.083	0.339	1,878	-0.071	0.330	2,155	-0.022	0.368
TRU	V123	1,446	0.102	0.334	1,788	0.128	0.333	1,692	-0.115	0.321	2,183	0.009	0.335
TRU	V124	1,452	0.169	0.350	1,974	0.179	0.328	1,700	-0.167	0.328	2,180	0.090	0.329
TRU	V126	1,447	0.035	0.394	1,930	-0.046	0.357	1,746	0.052	0.332	2,173	-0.147	0.379
TRU	V141	1,441	0.236	0.359	2,013	0.265	0.286	2,065	0.192	0.312	2,153	0.142	0.338
NOR	V9	1,420	-0.153	0.516	2,037	-0.213	0.476	2,112	-0.290	0.419	2,214	0.225	0.496
NOR	V19	1,477	-0.459	0.538	2,044	-0.560	0.431	2,443	-0.645	0.289	2,232	-0.082	0.703
NOR	V25	1,447	-0.278	0.538	2,044	-0.326	0.506	2,419	-0.596	0.323	2,210	0.008	0.602
NOR	V79	1,453	0.044	0.435	2,029	0.122	0.414	2,208	-0.173	0.349	2,195	0.134	0.396
NOR	V95	1,422	-0.026	0.338	1,865	-0.095	0.283	1,770	0.018	0.298	2,162	0.047	0.322
NOR	V108	1,450	-0.139	0.398	1,995	-0.172	0.423	2,130	-0.405	0.323	2,195	0.096	0.423
NOR	V121	1,448	0.077	0.376	2,011	0.254	0.377	2,158	-0.088	0.314	2,177	0.081	0.350
NOR	V132	1,432	-0.510	0.334	2,001	-0.546	0.319	1,913	-0.539	0.311	2,166	-0.398	0.367
NOR	V145	1,461	-0.344	0.465	2,025	-0.335	0.414	2,415	-0.163	0.293	2,204	-0.064	0.538
NOR	V147	1,462	0.213	0.506	1,998	0.185	0.503	2,005	0.083	0.435	2,199	0.449	0.405
NOR	V152	1,463	-0.026	0.576	2,009	-0.171	0.521	2,148	-0.097	0.424	2,200	0.362	0.467
NOR	V204	1,460	-0.042	0.465	2,003	0.115	0.450	2,090	0.116	0.398	2,167	0.109	0.467
NOR	V205	1,456	-0.252	0.395	2,004	-0.158	0.433	2,126	-0.102	0.419	2,167	-0.110	0.392
NOR	V207	1,454	0.319	0.436	1,978	0.351	0.431	2,183	0.492	0.338	2,158	0.383	0.407
NOR	V218	1,418	0.192	0.381	2,042	0.011	0.425	2,396	0.106	0.416	2,176	0.152	0.395
NET	V37	1,477	0.640	0.301	2,042	0.503	0.497	2,443	0.392	0.588	2,232	0.634	0.314

NET	V39	1,477	0.576	0.410	2,040	0.409	0.577	2,443	0.194	0.680	2,232	0.508	0.492
NET	V41	1,477	0.653	0.270	2,045	0.521	0.478	2,443	0.246	0.663	2,232	0.665	0.241
NET	V84	1,463	0.059	0.444	2,045	0.115	0.429	2,386	0.121	0.354	2,210	0.080	0.448
NET	V105	1,429	-0.057	0.330	2,010	-0.176	0.345	1,992	-0.314	0.286	2,205	-0.117	0.330
NET	V106	1,415	0.090	0.316	1,863	-0.008	0.332	1,498	-0.320	0.332	2,196	0.117	0.313
NET	V107	1,428	0.116	0.287	1,902	-0.006	0.331	1,461	-0.232	0.326	2,187	0.092	0.314
NET	V129	1,426	0.537	0.305	2,015	0.589	0.254	2,048	0.610	0.229	2,170	0.404	0.375
NET	V130	1,435	0.492	0.335	2,020	0.525	0.282	2,005	0.329	0.334	2,164	0.331	0.392
NET	V133	1,442	0.548	0.333	2,035	0.594	0.262	2,098	0.377	0.363	2,167	0.468	0.361
NET	V140	1,446	0.568	0.270	2,030	0.539	0.258	2,164	0.436	0.314	2,193	0.477	0.315

Factor SC	Wave5	CA			FR			UK			Total		
	Ques. No.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.	Valid Res.	Ave.	St. Dev.
TRU	V10	2,157	0.430	0.283	998	0.350	0.322	1,039	0.436	0.310	12,272	0.362	0.303
TRU	V22	2,157	0.353	0.269	1,000	0.214	0.303	1,038	0.323	0.258	12,297	0.289	0.297
TRU	V23	2,107	-0.111	0.698	996	-0.443	0.551	1,022	-0.277	0.651	12,084	-0.150	0.691
TRU	V46	2,135	0.334	0.289	999	0.183	0.323	1,026	0.276	0.305	12,154	0.251	0.326
TRU	V47	2,125	0.145	0.344	999	0.097	0.333	1,028	0.081	0.348	12,063	0.065	0.349
TRU	V68	2,150	0.235	0.346	996	0.087	0.347	1,029	0.185	0.362	12,171	0.152	0.365
TRU	V84	2,152	0.432	0.264	999	0.323	0.331	1,037	0.350	0.292	12,148	0.218	0.357
TRU	V125	2,148	0.623	0.209	993	0.583	0.276	1,032	0.634	0.202	12,266	0.593	0.237
TRU	V126	2,128	0.257	0.317	988	0.292	0.410	1,009	0.216	0.341	12,016	0.172	0.331
TRU	V127	2,152	0.438	0.277	997	0.528	0.286	1,029	0.462	0.277	12,190	0.360	0.292
TRU	V132	2,077	0.210	0.371	986	0.095	0.414	1,004	0.252	0.378	11,850	0.213	0.367
TRU	V136	2,141	0.266	0.342	997	0.121	0.388	1,026	0.167	0.379	12,135	0.204	0.351
TRU	V137	2,119	0.120	0.381	995	-0.134	0.398	996	0.067	0.397	11,920	0.100	0.372
TRU	V138	2,024	-0.095	0.361	994	-0.233	0.391	999	-0.150	0.385	11,819	-0.134	0.359
TRU	V139	2,050	-0.201	0.324	990	-0.329	0.349	975	-0.260	0.327	11,741	-0.249	0.315
TRU	V140	2,035	-0.106	0.348	981	-0.160	0.378	987	-0.123	0.368	11,711	-0.152	0.348
TRU	V141	1,995	0.022	0.339	1,001	-0.021	0.378	947	-0.046	0.361	11,673	-0.027	0.336
TRU	V142	2,029	-0.105	0.338	983	-0.111	0.382	946	-0.121	0.349	11,481	-0.095	0.341
TRU	V143	2,052	0.145	0.330	986	0.088	0.354	968	0.119	0.351	11,467	0.048	0.355
TRU	V144	1,971	0.165	0.323	935	-0.063	0.389	818	0.113	0.354	10,833	0.051	0.351
TRU	V145	2,040	0.193	0.337	994	0.125	0.399	971	0.191	0.348	11,311	0.107	0.362
TRU	V147	1,952	0.071	0.384	976	-0.002	0.408	905	-0.064	0.401	11,129	-0.017	0.384
TRU	V163	2,070	0.248	0.291	985	0.168	0.325	990	0.143	0.335	11,717	0.205	0.322
NOR	V9	2,149	0.151	0.493	996	-0.114	0.479	1,026	-0.073	0.505	11,954	-0.053	0.519
NOR	V19	2,164	-0.274	0.652	1,001	-0.579	0.407	1,041	-0.457	0.540	12,402	-0.422	0.568
NOR	V24	2,157	-0.137	0.603	996	-0.604	0.328	1,029	-0.314	0.554	12,302	-0.302	0.554
NOR	V89	2,151	0.207	0.429	993	0.014	0.480	1,030	0.136	0.446	12,059	0.068	0.433
NOR	V114	1,624	-0.012	0.295	931	-0.112	0.333	880	-0.033	0.291	10,654	-0.022	0.313
NOR	V131	2,098	0.123	0.420	972	-0.086	0.464	956	-0.026	0.427	11,796	-0.089	0.447
NOR	V146	2,164	-1.179	0.000	1,001	-1.179	0.000	1,041	-1.179	0.000	12,000	-0.362	0.671

NOR	V153	2,043	-0.391	0.333	978	-0.411	0.346	973	-0.318	0.371	11,506	-0.454	0.347
NOR	V186	2,144	-0.130	0.495	997	-0.424	0.403	1,034	-0.297	0.487	12,280	-0.222	0.461
NOR	V187	2,111	0.454	0.414	989	0.212	0.524	1,008	0.272	0.468	11,772	0.278	0.479
NOR	V192	2,139	0.300	0.467	994	-0.128	0.493	1,025	0.012	0.526	11,978	0.061	0.534
NOR	V204	2,071	0.139	0.453	998	-0.146	0.500	974	0.086	0.445	11,763	0.074	0.459
NOR	V205	2,103	-0.095	0.412	997	-0.213	0.459	991	-0.143	0.411	11,844	-0.143	0.419
NOR	V207	2,037	0.431	0.366	988	0.278	0.446	941	0.264	0.430	11,739	0.380	0.408
NOR	V225	2,152	-0.509	0.176	1,001	-0.520	0.177	1,010	-0.522	0.177	12,195	-0.104	0.458
NET	V35	2,164	0.667	0.236	1,001	0.386	0.592	1,041	0.638	0.305	12,400	0.552	0.443
NET	V37	2,090	0.647	0.286	1,001	0.194	0.680	1,041	0.494	0.506	12,324	0.434	0.558
NET	V39	2,164	0.673	0.217	1,001	0.344	0.618	1,041	0.680	0.194	12,403	0.534	0.464
NET	V95	2,156	-0.037	0.451	1,000	-0.168	0.455	1,038	-0.110	0.469	12,298	0.035	0.441
NET	V128	2,117	-0.048	0.344	996	-0.087	0.406	969	-0.072	0.359	11,718	-0.134	0.350
NET	V129	2,069	0.147	0.282	965	0.231	0.409	844	0.166	0.320	10,850	0.051	0.362
NET	V130	2,061	0.113	0.282	980	0.239	0.389	857	0.160	0.312	10,876	0.057	0.343
NET	V150	2,073	0.537	0.308	978	0.457	0.354	986	0.470	0.381	11,696	0.522	0.320
NET	V151	2,016	0.442	0.348	971	0.408	0.341	947	0.445	0.363	11,558	0.420	0.351
NET	V154	2,114	0.498	0.302	990	0.409	0.349	1,003	0.460	0.333	11,849	0.483	0.337
NET	V162	2,127	0.545	0.255	995	0.469	0.288	999	0.490	0.327	11,954	0.503	0.293

Note. TRU: social trust; NOR: religious social norms; NET: political networks.