Track 8: International Human Resource Management, Cross-cultural Management, and Qualitative Research Methods

Competitive Paper

Contradictions in national culture: Hofstede vs GLOBE

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Abstract

The concept of national culture has been a core topic of international business research for many years, based in large part on the seminal model developed by Geert Hofstede. A recent research project, the GLOBE study, presents an additional, expanded model of cultural measures. This paper takes the opportunity to compare cultural dimensions across these two important studies looking for consistencies and support in both data and analysis. Rather than mutual support, we found major inconsistencies and anomalies across the studies, in particular in respect of the key dimension of Uncertainty Avoidance. The most worrying of these is the highly significant negative correlation between GLOBE uncertainty avoidance practices measures and Hofstede's uncertainty avoidance index for specific cultures. If left unresolved these inconsistencies will erode the confidence researchers have in the foundations of much cross-cultural research.

Keywords: National culture, Hofstede, GLOBE

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Introduction

Research into international business has become a dynamic area of study over the last 40 years and is likely to become even more so as the process of economic globalisation accelerates into the future. Many specific areas have caught the attention of researchers but one of the most intriguing and popular of these are issues relating to national culture and its effects on business processes and outcomes. Much work within this field is being used to guide both theory and practice in international business management.

Definitions of the broad concept of culture abound without there being a general agreement on one. However most people have a general understanding of what culture entails namely shared values, beliefs and ideals within a community. According to House et al. (2004) the term culture "is used by social scientists to refer to a set of parameters of collectives that differentiate each collective in a meaningful way" (p.15). According to Hofstede (2001) culture is "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p.9) This culture-focused research is becoming more and more complex as it advances. Identifying and defining cultural dimensions and investigating the implications of national cultural differences have become deep and thought provoking (see Leung, Bhagat, Buchan, Erez and Gibson (2005) for examples). Of course in order for all this research to be meaningful, there must have been a solid understanding of what culture actually is and how it can be operationalized. This common point of cultural understanding has been provided for many years by the doyen of cultural studies in business, Geert Hofstede (1980). His work has more recently been expanded upon by the very large empirical study conducted by the GLOBE group (House et al., 2004). Whilst there has been some debate over the relative merits of these two key studies

(for example the set of articles introduced by Leung (2006) in JIBS), there has been little analysis of the consistency of results produced by the two studies which sheds light on the degree of validity of the culture constructs which are widely used. This is quite surprising in that with the availability of two major studies of culture, there should be opportunities to use each to support or contradict the other.

The GLOBE study reports on the relationship between its own practice and values measures and also on the relationship between its own dimensions and those of Hofstede. However little comment is made on those relationships and there has been remarkably little interest on the part of other researchers in comparing the two models. In fact the only discussion found by us in the literature is fundamentally misleading as follows: "…the results (of the GLOBE study) are consistent with previous results, and most of the cultural dimensions identified (in GLOBE) are related conceptually and correlated empirically with Hofstede's dimensions" and "Power Distance and Uncertainty Avoidance (are related) to the two Hofstede dimensions with the same labels" (Leung et al., 2005, p.366) . As shown in this paper's analysis section the nature of these relationships in fact are not mutually supportive as inferred. They are quite surprising and present worrying inconsistencies and anomalies.

Of particular interest in the above context is the cultural dimension titled Uncertainty Avoidance (UA) as defined and measured in both Hofstede (2001) and GLOBE (House et al., 2004) and which is so important in international business literature. The objective is to determine whether there are commonalities and consistencies between these two studies which support our confidence in using the construct of Uncertainty Avoidance as researchers.

The paper begins with a short description of the Hofstede (1980) and House et al. (2004) forms of culture measurement and some of their uses in management research. The importance of Uncertainty Avoidance is highlighted. The paper then analyses and compares the dimension of Uncertainty Avoidance across both models. Differences between the studies

in their interpretation of the dimension and the implications of these differences are discussed. Finally some issues for further research into this important area of international business are canvassed.

Hofstede and GLOBE

Hofstede is the pioneer researcher into culture and its effects on management of business. According to Smith (2006) Hofstede's original work (Hofstede, 1980) has "served as a marker post for subsequent investigators for two decades" (p.915). He surveyed a large number of employees of IBM between 1967 and 1973 in more than 70 countries to extract data on their cultural attributes. This work is updated and expanded in Hofstede (2001) and it continues to be widely cited and used by management scholars.

Hofstede's major advance in the field of cultural research is primarily the development of a set of dimensions which can be measured through survey instruments to obtain average values for a particular group of people and hence a measure of their national culture attributes. The dimensions which he identifies are Power Distance, Uncertainty Avoidance, Individualism, Masculinity and Long Term Orientation. By drawing on the dimension measures of different groups one can develop an understanding of the cultural differences between these groups.

Hofstede's work is subject to several criticisms, especially in respect of the usefulness of operationalizing culture through a series of numerically measured dimensions, some preferring to use richer qualitative techniques (MacSweeney, 2002). Cultural convergence is a phenomenon that many argue has had profound consequences on societies, including encouraging a convergence of cultural differences (Shenkar, 2001). If so then dimensions measured in the 1960's would now be much altered. Schwartz and Bilsky (1990) argue that insufficient aspects of culture are taken into account and Javidan et al (2006) point to the US and specifically IBM centric nature of Hofstede's data and therefore doubt its

generalizability. In spite of these (and other) criticisms, Hofstede's work, as stated, remains the dominant model for cross-cultural research.

The GLOBE study (House et al., 2004) was conducted in the mid 1990's and involved 127 investigators in 62 countries or regions. The study was designed to replicate and expand on Hofstede's (1980) work and to test various hypotheses that had been developed in particular on leadership topics. Survey questionnaires were developed and collected from more than 17,000 middle managers in 951 organisations across 3 specific industries.

The GLOBE study, in a similar manner to Hofstede, develops nine cultural dimensions across both actual society practice ("As Is") and values ("Should Be") in the different cultural settings. These dimensions are Performance Orientation, Future Orientation, Gender Egalitarianism, Assertiveness, Institutional Collectivism, In-Group Collectivism, Power Distance, Humane Orientation and Uncertainty Avoidance. Again the dimension measures for different societies allow an analysis of the cultural differences that exist between these groups.

There are a number of similarities as well as differences between the two studies in the way the concept of national culture is measured. For example, both studies include the dimensions of uncertainty avoidance and power distance. However, Hofstede's masculinity dimension is measured with the two dimensions of gender egalitarianism and assertiveness in the GLOBE study. Similarly, Hofstede's collectivism is measured with two constructs: institutional collectivism (collectivism I) and in-group collectivism (collectivism II). Finally, whereas Hofstede's long-term orientation is similar to GLOBE's future orientation, there are two additional dimensions of culture in GLOBE – performance orientation and humane orientation – that are not measured by Hofstede. Besides differences in the number of dimensions, another key difference is that the GLOBE study separately measures two distinct

aspects of national culture – practices and values – for each of the nine dimensions. Thus, there are eighteen culture scores for each country in GLOBE versus five in Hofstede.

The GLOBE study is less criticised than Hofstede, either because there are fewer controversial issues or because it is much more recent and therefore researchers haven't yet fully analysed it. Hofstede himself provides a critical review which, amongst other issues, argues that the GLOBE study is US centric, that it fails to capture what is intended through the questionnaire and that the study's total of 18 dimensions are unnecessary and lack parsimony.

The Use of Hofstede/GLOBE Dimensions in Research

The culture concept, as mentioned, is a highly researched area of international business. Apart from providing a deep understanding of the concept of culture and its differences across nations, the Hofstede and GLOBE studies provide an empirical base on which researchers can build across a wide range of international business topics. These extensions of the cultural differences models to other areas of scholarly study are myriad. A brief set of examples follows.

One of the best known applications of the Hofstede model is the development of a cultural distance index by Kogut and Singh (1988) which allows them to compare how different, across all Hofstede's dimensions, the United States is to 13 other countries and to draw conclusions on the importance of cultural differences to entry mode. Brewer (2007) uses the same formula but with the GLOBE cultural dimensions to investigate the importance of cultural distance on Australian export outcomes.

Textbooks and academic research commonly argue that business is considerably more difficult to conduct when the parties are from substantially different cultures (Harzing, 2004; Hassel & Cunningham, 2004; Hick, 2003; Hill, 2007) and many examples of cultural marketing mistakes made by practitioners have been documented, including mistakes by

large multinational firms in international markets (Hick, 2003). International business textbooks almost universally use the Hofstede cultural model to explain the importance of cultural differences and how to measure them.

Hofstede himself extends his model of cultural differences to argue that the significant differences that exist between the values of some societies need to be carefully managed for international business activity to succeed (Hofstede, 1994). Indeed Hofstede's two best known books both use the primary title "Culture's Consequences" (2001) and emphasise the management implications of his differences model. Further, as a result of difficulties in understanding different business systems, it is generally thought that firms first seek to expand into culturally similar markets and then later diversify into more culturally distant markets (Johanson & Vahlne, 1977), thus culture has a direct impact on international market selection. Guiso, Sapienza and Zingales (2005) show that, in the case of the European Union, cultural differences drive trust between peoples which in turn shapes trade and investment patterns. More cultural differences lower trust which lowers trade volumes between firms and therefore countries.

At the firm level, Grosse and Trevino (1996) show that cultural differences have a negative influence on foreign investors into the United States. Similarly, Li (1994) demonstrates that cultural distance has a negative effect on the investment decisions of service providing multinationals in the Asia Pacific region. Cultural distance is found by Lee (1998) to be a major factor in opportunistic behaviour by importers in respect to their exporter partners. Boyacigiller (1990) argues that people from different cultures who work together face increased levels of misunderstanding and consequent problems.

Clearly much cross-cultural research in international business is based on, in particular, the Hofstede culture model. We can expect such research to continue and we can also expect some researchers to elect to use the more recent GLOBE study data as their

starting point. An analysis of the complementarities and differences between the two models in terms of the validity of their cultural difference measures would therefore seem a useful step. Such an analysis is undertaken in the following sections.

Uncertainty Avoidance

According to the transaction cost theory (Williamson, 1985), uncertainty is one of the key determinants of market transactions between firms, and plays a critical role in business and, in particular, international business decisions (Hofstede, 1980). The focus on Uncertainty Avoidance in this article is justified because of its stated importance in international business management (Hofstede, 2001; Shenkar, 2001). As already stated, Hofstede and GLOBE both incorporate a common cultural dimension called Uncertainty Avoidance (UA), although there is disagreement between the two studies on how it should be measured. Hofstede (2001) describes UA as follows: "on the national cultural level, tendencies toward prejudice, rigidity and dogmatism, intolerance of different opinions, traditionalism, superstition, racism, and ethnocentrism all relate to a norm for intolerance of ambiguity that I have measured and expressed in a national Uncertainty Avoidance Index" (p.146). He emphasises that UA is different from risk avoidance. Hofstede's measure of UA was based on responses to the following three questions on a scale of 1 to 5:

- How often do you feel nervous at work? (from *I always feel this way* to *I never feel this way*)

- How long do you think you will continue working for this company? (from *two years at the most* to *until I retire*)

- Company rules should not be broken, even when the employee thinks it is in the company's best interests (from *strongly agree* to *strongly disagree*).

    GLOBE (House et al., 2004) defines UA as "the extent to which members of collectives seek orderliness, consistency, structure, formalized procedures and laws to cover

situations in their daily lives) (p.603). The study adds that there is a positive and significant correlation between uncertainty avoidance and intolerance of ambiguity. The GLOBE group argues that Hofstede's questions 2 and 3 above are of very low face validity and uses the following four questions in its study on society practices. UA society values are assessed using the same questions but with "should be" substituted for "are". All items are measured on seven-point Likert scales. The first three items range from *strongly agree* to *strongly disagree*, and the last item from *almost all situations* to *very few situations*.

- In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation.

- In this society, most people lead highly structured lives with few unexpected events.

- In this society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do.

- This society has rules or laws to cover situations.

On the basis of the definitions and understandings of the cultural model discussed above, UA takes on a special significance in the field of international business. More than other dimensions, UA is expected to affect international cooperation because of the tendency for high UA societies to avoid the ambiguity and uncertainty that exists more in international business transactions than in domestic transactions (Hofstede, 2001; Shenkar, 2001). Thus this study looks at the UA dimension across the two cultural models first because of its perceived importance in the conduct of international business.

Methodology

Hofstede (1980) and GLOBE (2004) measure national culture on five and nine dimensions respectively as previously described. This study performs a number of correlation analyses on these dimensions to examine the extent to which there is congruence between GLOBE cultural practices and values, as well as between Hofstede uncertainty avoidance index and GLOBE uncertainty avoidance practices.

Data

The national culture data for this study are collected from published sources. Hofstede's country culture scores for 68 countries/regions are obtained from http://www.geert-hofstede.com/hofstede_dimensions.php. GLOBE country culture scores for 62 countries are compiled from House et al. (2004). We make a few assumptions to match the Hofstede and GLOBE data sets. The GLOBE culture scores for Qatar and Egypt are matched with the scores for the Arab World in Hofstede. Similarly, GLOBE culture data for South Africa-White (instead of Black) and Germany-West (instead of East) is matched with Hofstede culture data for South Africa and Germany respectively. This matching is based on the assumption that Hofstede's country culture scores largely represent White South Africa and West Germany respectively as the Hofstede survey was conducted among IBM employees most of whom are likely to be from these groups. Finally, Czech Republic is excluded as there is no data available in GLOBE, even though the country is listed as part of the GLOBE study. Overall, country culture data for 50 countries are available in both the sources, and these are used for further analysis. Table 1 contains the list of countries extracted for this study from Hofstede and GLOBE.

TABLE 1 HERE

Data analysis and results

Table 2 contains descriptive statistics for the cultural dimensions scores in both Hofstede and GLOBE. First, we look at the inter-correlations between GLOBE national culture practices and values. Next, we examine the correlations between the Hofstede and GLOBE measures. See Table 3 for bivariate correlations among GLOBE country culture practices, GLOBE country culture values and Hofstede country culture indices.

TABLES 2 and 3 HERE

Of the nine correlations between GLOBE culture practices and values, only one (i.e., gender egalitarianism) has the expected correlation that is both significant and positive. Three of the nine correlations are not significant (i.e., power distance, in-group collectivism and performance orientation). The remaining five dimensions of culture – uncertainty avoidance, institutional collectivism, assertiveness, future orientation and humane orientation – unexpectedly have significant *negative* correlations between culture practices and values. The last result is surprising since there is neither any theoretical rationale for a significant negative correlation between culture practices and values nor many convincing explanations in the GLOBE study for this counter-intuitive finding.

Hofstede's individualism has significant negative correlations with in-group collectivism practices and institutional collectivism values. However, the relationship is not significant with either institutional collectivism practices or with in-group collectivism values. Thus, only two of the four correlations have expected sign and significance.

Hofstede's masculinity dimension has significant positive correlation only with GLOBE assertiveness practices, but non-significant relationship with the other three GLOBE culture measures that it is expected to relate, namely, gender egalitarianism practices and values and assertiveness values. Similarly, Hofstede's long-term orientation has non-significant relationship with both future orientation practices and values.

Lastly, as expected, Hofstede's power distance has a significant positive correlation with GLOBE power distance practices but *not* with GLOBE power distance values. In contrast, Hofstede's uncertainty avoidance has significant positive correlation with GLOBE uncertainty *values*, but significant *negative* correlation with GLOBE uncertainty avoidance *practices*.

To sum up, of the fourteen correlations, only five have expected sign and significance, whereas eight are not significant, and one (uncertainty avoidance) is significant but with a sign that is opposite to what one would expect. As the uncertainty avoidance dimension has been identified as the most important in business, the next section discusses this dimension in more detail.

Discussion of results

House et al. (2004) acknowledge both the negative correlations between culture practices and values (p.736) as well as the negative correlations between Hofstede and GLOBE dimensions (p.140). However, they do not offer compelling arguments for the counter-intuitive findings. To help researchers understand and use the national culture data and examine its implications for international business, it is critical to reconcile the results from these two iconic studies on national culture. Identification of the similarities, and, in particular, the differences between the national culture scores in these two studies will assist IB scholars and practitioners in making informed judgment about the relative validity and reliability and hence the usefulness of the national culture scores for their own research.

To get a clearer picture of the negative correlation between uncertainty avoidance practices and values, Figure 1 contains the scatter plot of uncertainty avoidance practices and values in GLOBE for each of the fifty countries included in our study. As shown in the figure, as countries become more and more uncertainty avoiding in practice (or values), they simultaneously become less and less uncertainty avoiding in their values (or practices). For

example, Russia and Hungary have the lowest uncertainty avoidance practices scores of 2.9 and 3.1 respectively but high uncertainty avoidance values scores of 5.1 and 4.7 respectively. On the other hand, Switzerland and Sweden have the highest uncertainty avoidance practices scores of 5.4 and 5.3 respectively but low uncertainty avoidance values scores of 3.2 and 3.6 respectively. The GLOBE study does not provide compelling rationale for these apparent counter-intuitive findings. Whereas it is plausible that uncertainty avoidance practices and values may vary within a country, it is rather difficult to explain a near-complete reversal in values and practices scores for almost all countries in the data set, as reflected by the very high and significant negative correlation of 0.64 between uncertainty avoidance practices and values for the fifty countries analyzed here.

FIGURE 1 HERE

A second interesting finding is the highly significant *negative* correlation of minus 0.69 between Hofstede's uncertainty avoidance and GLOBE uncertainty avoidance practices. A plausible explanation for this finding is that some national cultures may have changed over the 25-year gap between the two studies. Figures 2 and 3 provide some evidence of this change. As shown in figure 2, in the case of Hofstede (who collected the data around 1970), the skewness of the uncertainty avoidance distribution is negative, that is, the mean is less than the median. In other words, more than half the countries in the data set have above-average uncertainty avoidance. In the case of the GLOBE study which was carried out nearly a quarter century later, around 1995 (figure 3), the skewness of the uncertainty avoidance distribution is positive, that is, the mean is greater than the median and less than fifty-percent of the countries in the data set have above-average uncertainty avoidance. Overall, the data suggest that globally, the number of countries with lower levels of uncertainty avoidance has increased from 1970 to 2005, coinciding with rising income, wealth and economic prosperity worldwide.

FIGURES 2 AND 3 HERE

However, the above explanation is weakened when we look at the correlation between Hofstede uncertainty avoidance and GLOBE uncertainty avoidance practices which has a value of minus 0.69 and which is highly significant. The picture becomes even more revealing when we plot the uncertainty avoidance scores from Hofstede and GLOBE for the fifty countries in the data set. As shown in Figure 4, we find that countries that have high uncertainty avoidance in Hofstede in 1970 become less so in GLOBE in 1995, but also that the countries that are low on uncertainty avoidance in Hofstede in 1970 become more uncertainty avoiding in GLOBE in 1995. For example, Singapore and Denmark that are 2.4 and 1.8 standard deviations below the mean on uncertainty avoidance in Hofstede are 1.9 and 1.7 standard deviations above the mean on the same culture dimension in GLOBE. On the other hand, Greece and Portugal that are 2 and 1.7 standard deviations above the mean on uncertainty avoidance in 1970 are 1.3 and 0.4 standard deviations below the mean in GLOBE. That is, there is almost complete reversal of countries from low to high uncertainty avoidance and vice versa during the 25-year period from 1970 to 1995. Whereas global convergence in the direction of low uncertainty avoidance may seem plausible in the light of increasing global economic integration, it is rather difficulty to justify the near-complete reversal of the countries on the uncertainty avoidance league table.

FIGURE 4 HERE

The last result impels us to conclude that there is a lack of congruence in the items used to measure the construct of "uncertainty avoidance" in Hofstede and GLOBE. In other words, the same label of "uncertainty avoidance" seems to be used, on the evidence available, to represent polar opposite national culture concepts. Unless this debate is settled, empirical examination of the link between uncertainty avoidance and international business strategy and decision-making will continue to produce inconsistent and odd findings. For example, we

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find in calculations using World Bank data that Hofstede's uncertainty avoidance has a significant negative effect on foreign trade and FDI outflows, as expected. However, GLOBE uncertainty avoidance practices have a significant positive effect on foreign trade and FDI outflows, whereas GLOBE uncertainty avoidance values do not affect a country's international trade, but have a significant negative effect on outward FDI. If the uncertainty avoidance dimension is conceptually consistent between Hofstede and GLOBE, as Leung et al (2005) conclude, we will not find these inconsistent results. Thus, there are serious contradictions between Hofstede and GLOBE national culture dimensions. Unless these inconsistencies are ironed out, the use and inferences based on these data will be of dubious value. This calls into question a very large amount of extant cross-cultural literature.

Implications

Both Hofstede and GLOBE use the term "uncertainty avoidance" to reflect apparently different or even contradictory characteristics of national culture. If the national culture attributes that are captured by the uncertainty avoidance dimension are indeed significantly different in Hofstede and GLOBE, it is imperative that they should be called by different names. Otherwise, the construct is likely to misrepresent the items that are used to measure it, resulting in confusion in the subsequent use and operationalization of the construct by researchers and practitioners.

Although we have discovered this anomaly in the context of the national culture dimension of uncertainty avoidance, it is likely that a similar lack of precision in naming and/or measuring constructs may exist for the other dimensions in Hofstede and GLOBE. Researchers usually start with a theoretical construct and then identify a set of items to measure the construct. Often, following the data collection and subsequent analysis, a subset of the original items rather than the entire set is chosen to represent the construct in the empirical testing. In such situations, it is plausible that the items that are finally selected to

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represent a construct may sometimes weakly represent the original construct. This may partly explain the significant differences in the content and the significant negative correlations between Hofstede and GLOBE.

It is therefore critical for management scholars to use construct names that faithfully represent the set of items that are ultimately used to empirically validate the measures of the construct. Comparing structural relationships across a number of studies is meaningful only if the items used to measure the model constructs are either the same across studies, or at least are sampled from a domain that can be reasonably expected to represent the construct.

Conclusion

One of the key areas of international business research relates to the concept of national culture and the effects of cultural differences on firm management and performance. This study has taken the opportunity to compare the seminal cultural model developed by Hofstede (2001; 1980) with the much more recent GLOBE study conducted by House et al. (2004). Particular attention was paid to the cultural dimension of Uncertainty Avoidance as this is commonly accepted as one of the most important elements of culture in international management. We have found that there are major contradictions between definition and measurement of the dimension in the two studies which must lead to questions about the validity of research based on one or other of them.

There are several possible explanations for the inconsistencies which this article has identified. For example, it is possible that over the time between the Hofstede and GLOBE studies, the cultural dimensions of the nations surveyed have changed. However, it seems more likely that there are major differences between the Uncertainty Avoidance dimensions in the two studies and that they represent two entirely opposite concepts as they are significantly negatively correlated. If so, this is a major problem because the concepts have the same name and are therefore assumed to be the same. Researchers are taking both the

culture models as valid as presented and are using the relevant definitions and measures in the search for answers to a wide range of questions in international management. This article calls for caution in this process and points to the need for there to be a more consistent and dependable understanding of the elements of culture that can be used with confidence within this most important area of international business. How this might be accomplished is an issue for further thought and debate.

To conclude, this paper makes an important contribution to the international management literature by identifying the inconsistencies in the two iconic studies on national culture. Hundreds of international business scholars unquestioningly use Hofstede culture dimensions and scores to explain international business strategy and decision-making. The trend will probably continue with the GLOBE data. Leung et al. (2005) conclude that "UA is conceptually the same in both Hofstede and GLOBE" but our analysis shows that their conclusion is erroneous. There are significant differences in the definition, operationalization and ultimately the country scores on uncertainty avoidance between Hofstede and GLOBE. For the field to progress there is a need for greater clarity, precision and congruence across studies in the definition, operationalization and measurement of national culture and its various dimensions.

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Table 1   List of countries extracted from Hofstede and GLOBE

Hofstede		GLOBE		This study
Arab World	Singapore	Albania	South Korea	Argentina
Argentina	Slovakia	Argentina	Spain	Australia
Australia	South Africa	Australia	Sweden	Austria
Austria	South Korea	Austria	Switzerland	Brazil
Bangladesh	Spain	Bolivia	Switzerland-FR	Canada
Belgium	Surinam	Brazil	Taiwan	China
Brazil	Sweden	Canada	Thailand	Colombia
Bulgaria	Switzerland	China	Turkey	Costa Rica
Canada	Taiwan	Colombia	USA	Denmark
Chile	Thailand	Costa Rica	Venezuela	Ecuador
China	Trinidad	Czech Republic	Zambia	Egypt
Colombia	Turkey	Denmark	Zimbabwe	El Salvador
Costa Rica	United Kingdom	Ecuador		Finland
Czech Republic	United States	Egypt		France
Denmark	Uruguay	El Salvador		Germany (West)
East Africa	Venezuela	England		Greece
Ecuador	Vietnam	Finland		Guatemala
El Salvador	West Africa	France		Hong Kong
Estonia		Georgia		Hungary
Finland		Germany-E		India
France		Germany-W		Indonesia
Germany		Greece		Iran
Greece		Guatemala		Ireland
Guatemala		Hong Kong		Israel
Hong Kong		Hungary		Italy
Hungary		India		Japan
India		Indonesia		Kuwait
Indonesia		Iran		Malaysia
Iran		Ireland		Mexico
Ireland		Israel		Morocco
Israel		Italy		Netherlands
Italy		Japan		New Zealand
Jamaica		Kazakhstan		Nigeria
Japan		Kuwait		Philippines
Luxembourg		Malaysia		Poland
Malaysia		Mexico		Portugal
Malta		Morocco		Qatar
Mexico		Namibia		Russia
Morocco		Netherlands		Singapore
Netherlands		New Zealand		South Africa (White)
New Zealand		Nigeria		South Korea
Norway		Philippines		Spain
Pakistan		Poland		Sweden
Panama		Portugal		Switzerland
Peru		Qatar		Taiwan
Philippines		Russia		Thailand
Poland		Singapore		Turkey
Portugal		Slovenia		UK
Romania		South Africa-B		USA
Russia		South Africa-W		Venezuela

Table 2   Descriptive statistics for culture dimension scores in Hofstede and GLOBE

	N	Min	Max	Mean	Std. Deviation	Median	Skewness
Hofstede							
Power Distance	50	11	104	58.20	22.64	61.50	-0.22
Uncertainty Avoidance	50	8	112	64.94	23.43	68.00	-0.25
Individualism	50	6	91	45.32	24.87	40.00	0.24
Masculinity	50	5	95	51.98	17.90	52.00	-0.33
Long-term orientation	21	16	118	49.95	28.02	44.00	0.92
GLOBE Practices							
Power Distance	50	3.89	5.80	5.19	0.39	5.18	-0.99
Uncertainty Avoidance	50	2.88	5.37	4.16	0.61	4.08	0.36
Institutional Collectivism	50	3.25	5.22	4.26	0.45	4.28	0.17
In-group Collectivism	50	3.53	6.36	5.11	0.74	5.40	-0.69
Gender Egalitarianism	50	2.50	4.08	3.34	0.37	3.33	0.00
Assertiveness	50	3.38	4.79	4.13	0.37	4.12	-0.05
Future Orientation	50	2.88	5.07	3.86	0.48	3.86	0.15
Performance Orientation	50	3.20	4.94	4.11	0.41	4.11	-0.17
Humane Orientation	50	3.18	5.12	4.07	0.47	4.05	0.20
GLOBE Values							
Power Distance	50	2.04	3.53	2.70	0.32	2.70	0.37
Uncertainty Avoidance	50	3.16	5.61	4.60	0.63	4.67	-0.53
Institutional Collectivism	50	3.89	5.65	4.79	0.50	4.84	-0.16
In-group Collectivism	50	4.94	6.52	5.68	0.36	5.73	0.06
Gender Egalitarianism	50	3.18	5.17	4.52	0.51	4.60	-0.83
Assertiveness	50	2.66	5.56	3.77	0.68	3.67	0.90
Future Orientation	50	4.33	6.20	5.48	0.41	5.57	-0.59
Performance Orientation	50	5.17	6.58	5.94	0.30	5.96	-0.34
Humane Orientation	50	4.49	6.09	5.43	0.26	5.47	-0.77

Table 3 Correlations between cultural dimension scores in Hofstede and GLOBE

		Hofstede					GLOBE Cultural Practices								
		Power Distance	Uncertainty Avoidance	Individualism	Masculinity	Long-term Orientation	Power Distance	Uncertainty Avoidance	Institutional Collectivism	In-group Collectivism	Gender Egalitarianism	Assertiveness	Future Orientation	Performance Orientation	Humane Orientation
GLOBE Cultural Practices	Power Distance	.521(**)													
	Uncertainty Avoidance		-.688(**)												
	Institutional Collectivism			0.11											
	In-group Collectivism			-.761(**)											
	Gender Egalitarianism				-0.083										
	Assertiveness				.341(*)										
	Future Orientation					-0.137									
	Performance Orientation														
	Humane Orientation														
GLOBE Cultural Values	Power Distance	0.118					-0.277								
	Uncertainty Avoidance		.286(*)					-.644(**)							
	Institutional Collectivism			-.545(**)					-.699(**)						
	In-group Collectivism			-0.213						0.223					
	Gender Egalitarianism				0.019						.385(**)				
	Assertiveness				0.205							-.309(*)			
	Future Orientation					-0.156							-.397(**)		
	Performance Orientation													-0.25	
	Humane Orientation														-.366(**)

Not significant   Significant, and sign as expected   Significant, but sign opposite to expected   **p<.01, *p<.05 (2-tail)

Figure 1   Scatter plot of GLOBE Uncertainty Avoidance Practices and Values
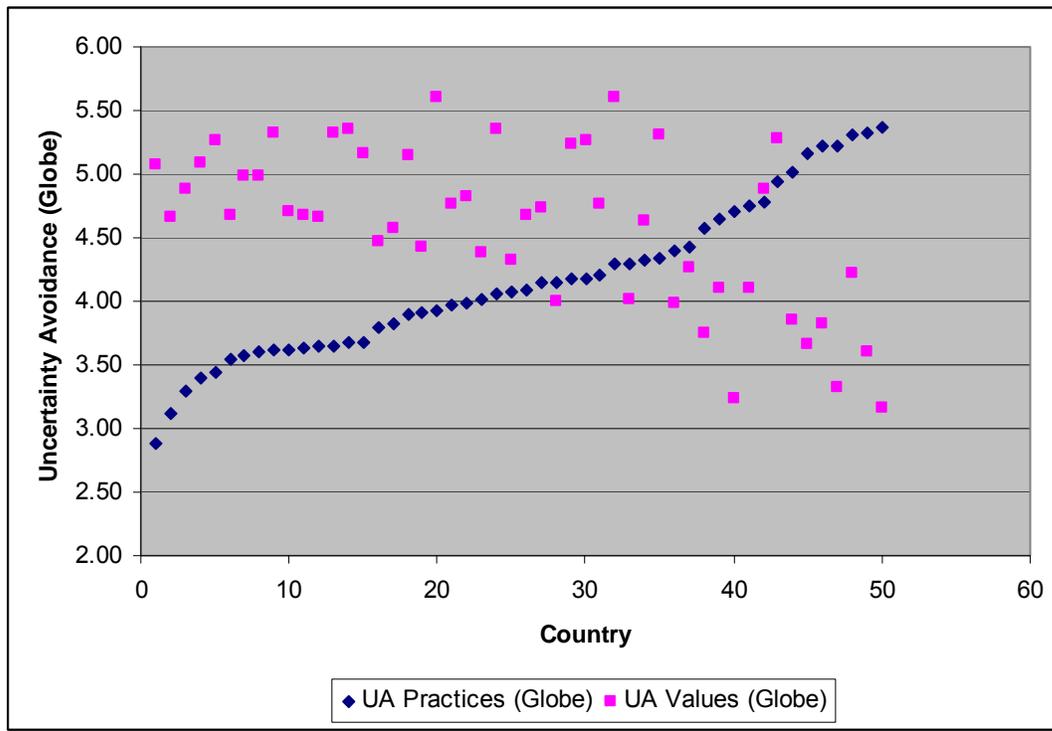
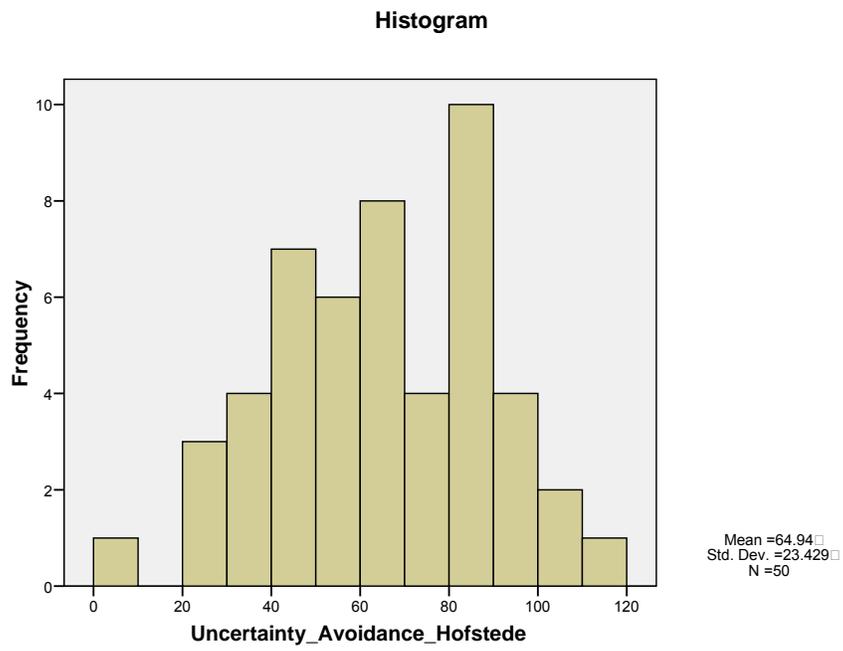Figure 2 Frequency distribution of Hofstede Uncertainty Avoidance Index

Histogram

Mean =64.94
Std. Dev. =23.429
N =50

Figure 3   Frequency distribution of GLOBE Uncertainty Avoidance Practices

Histogram

Mean =4.16
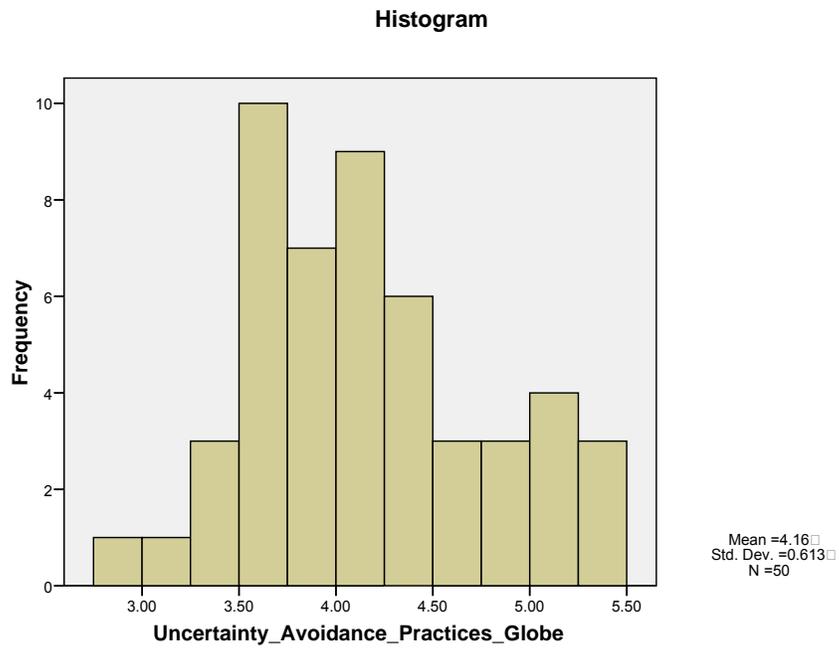Std. Dev. =0.613
N =50

Figure 4   Scatter plot of Hofstede Uncertainty Avoidance Index and GLOBE Uncertainty
          Avoidance Practices (standardized scores)