



## Cultural Relevance to Sustainability Reporting in Asian and European Banking

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### Abstract

The purpose of this paper is to test whether significant differences in sustainability reporting exist between banking in Asian and European. The sample consists of 65 banks from 15 countries in Asian and 18 countries in European. The division of Asian and European is derived from the Hofstede cultural dimension. This study uses GRI financial services sector supplement to measure sustainability reporting. Non-parametric (Mann-Whitney) tests are computed to achieve the stated objective. Result reveals that sustainability reporting in European is higher than in Asian. This supports the first hypothesis. Differences test results also support hypothesis that there is a significant differences in sustainability reporting between the two regions. However, differences test result per category show that there is no significant differences for the economic category and there are significant differences for both other categories, namely social and environmental. The finding suggests that sustainability reporting is likely to be influenced by national cultures. With regard to data, Hofstede dimensions were identified and developed over 30 years ago and no development over time with dimensional scores. Rather than comparing two countries, this study tries to analyze on a broader scale, ie territory.

#### Keywords:

Sustainability reporting  
Hofstede cultural dimension  
National cultures  
Financial services.

#### JEL Classification:

M40,G39,Z13.

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#### Publisher:

Scientific Publishing Institute

## 1. Introduction

In recent years, sustainability issues have become increasingly important for organizations worldwide (Adams & Narayanan, 2007) with sustainability reporting having emerged as a key reporting mechanism of accountability organizations. Sustainability reporting is a practice of measuring, disclosing, and accountability to internal and external stakeholders of the organization's performance towards sustainable development goals (Global Reporting Initiative, 2006).

This practice is voluntary reporting that demonstrates the inclusion of social dimensions and environmental concerns in business operations as well as in interaction with stakeholders (Marrewijk & Werre, 2003). Sustainability reporting can be considered a new trend in corporate reporting that integrates the company's financial, environmental and social performance into a single report (Zwetsloot & Van Marrewijk, 2004); (Christofi, Christofi, & Sisaye, 2012); (Hahn & Kühnen, 2013).

The idea of sustainability has three dimensions derived from the Triple Bottom Line concept introduced by John Elkington in 1994. Sustainability reports are also demanded and expected by investors, customers, employees, government and other stakeholders (Strand, 2014).

Culture has long been recognized as a key characteristic underlying systematic differences in management behavior (Naor, Goldstein, Linderman, & Schroeder, 2008). Cultural norms and beliefs are dimensions that affect perception, disposition, and human behavior (Kull & Wacker, 2010).

In terms of culture, accounting researchers have sought to integrate cross-national differences in societal (cultural) values to explain management behaviors and accounting phenomena such as reporting practices, earnings management, social reporting and the environment (Han, Kang, & Salter, 2010). Since the conceptual

framework (Gray, 1988) suggests that Hofstede's cultural dimension may influence accounting values (conservatism, transparency, uniformity), the use of state culture in accounting research has gained much attention from researchers (Secord & Su, 1994), (Hope, 2003), (Doupnik & Tsakumis, 2004), (Tsakumis, 2007), (Chand, Patel, & Day, 2008), (Hans, Kang, Salter, & Yoo, 2010), (Orij, 2010), (Khlif, 2016), (Salter & Lewis, 2011), (Lee & Herold, 2016), (Khlif, 2016). Kirkman, Lowe, and Gibson (2006) suggests that Geert Hofstede's cultural classification represents the most influential national cultural framework in business literature and has inspired many empirical studies.

Hofstede's cultural dimensions have also been hypothesized to influence financial reporting policies (Hope, 2003); (Jaggi & Low, 2000) social and environmental reporting (Orij, 2010); (Khlif, 2016); (Emeni & Ugbogbo, 2014) and earnings management practices (Riahi & Omri, 2013); (Doupnik, 2008); (Pacheco & Wheatley, 2017).

Hofstede introduces five cultural dimensions consisting of: power distance index, uncertainty avoidance index, individualism vs. collectivism, masculinity vs. femininity, and long term orientation. Based on the index data of each dimension Hofstede there is a tendency that the index of PDI in Asian is higher than in European. The index uncertainty avoidance, individualism, masculinity and long term orientation tend to be higher in European than in Asian (Hofstede, 1980).

The issue of sustainability reporting has become a global issue. This means that differences between countries can also cause differences in reporting as stated by Khlif (2016) national culture may affect corporate reporting policy. The goal here is to detect the cultural aspects of the country that have an identifiable influence on sustainability reporting.

Therefore, this study will examine whether there are significant differences between bank sustainability reports in Asian and European. The idea behind this research is to examine cultural relevance based on Hofstede's cultural dimension on sustainability reporting in both regions.

The rest of the paper is organized as follows. The next section contains an overview of previous research, particularly similar research on the determinants of sustainability reporting and studies that link social or financial accounting with culture. This is followed by a theoretical framework, including previous related literature. The next section contains the development of hypotheses, methods and research results. The final section includes conclusions and limitations.

## **2. Literature Review and Hypothesis Development**

### **2.1. Hofstede Theory**

Hofstede's work on the national cultural dimension began in the 1960s. Research conducted for IBM staff in offices around the world.

Hofstede originally identified four dimensions that represent the values of people in the workplace related to the country in which they work. Hofstede refers to the dimension as "difference". The four dimensions are power distance index (PDI), individualism versus collectivism (IDV), masculinity vs femininity (MAS) and uncertainty avoidance index (UAI). The fifth dimension, long term orientation (LTO) was added in 1987 (Hofstede, Hofstede, & Minkov, 2010).

Hofstede et al. (2010) establishing five dimensions as an index for all countries by linking the demographic, geographical, economic and political aspects of a society. This concept is useful in formulating hypotheses for comparative cross-cultural research.

#### **(1) Power Distance Index / PDI**

Power distance measures society's acceptance of differences in power distribution within an organization or institution (Hofstede, 1984). In general, the high power distance indicates the condition of the community is more receptive to what is presented in the report so that the demand for information on an institution tends to be lower, and vice versa (Violita, Syahroza, & Nasution, 2014). Countries with higher power distance accept that there is a hierarchy between superiors and subordinates (Javidan, House, Dorfman, Hanges, & Sully de Luque, 2006). Those with a high power distance culture tend to rely on superiors to make decisions. Those with a high power distance culture tend to rely on superiors to make decisions (Lim, 2004). Power distance refers to the level of equality or inequality between people in a country. High power distance scores also imply that power inequality prevails in a country (Khlif, 2016). According to Once and Almagtome (2014) if the level of power distance in a country is high then the level of environmental reporting conducted by the company is low.

#### **(2) Uncertainty Avoidance Index (UAI)**

Uncertainty avoidance is the degree to which societies within a culture are in an unstructured, unclear, ambiguous or unpredictable situation in the future (Hofstede, 1984). People who are in a culture of high uncertainty avoidance tend to be emotional. They try to minimize the unusual circumstances. In the event of a change, it will be faced with caution, planning and applying the rules of law and regulations. The high uncertainty avoidance index indicates that the company is concentrating more on things that have more certainty. Communities with high levels of uncertainty will reduce the impact of uncertainty with technology and regulation. Managers in conditions with higher uncertainty avoidance rates, will further avoid risk (Zhang, Zhang, & Zhang, 2015). In contrast to the low uncertainty avoidance index

where people accept and feel comfortable in unstructured situations or changing environments. They tend to have some rules in their activities, and tend to be more pragmatic and more tolerant of change. Cultures with high uncertainty avoidance in a country will affect the company's management to make reportings with high levels of information (Priyastiw, 2016). With regard to the reporting of sustainability reporting, Hofstede points out that in a society with high levels of uncertainty avoidance, this will be neutralized with the rules of law and regulations. In line with the European region has improved instrument sustainability reporting compared to Asian which has a low uncertainty avoidance index.

### (3) Individualism versus collectivism (IDV)

Individualism vs. collectivism is how people define themselves and their relationships with others. Culture of individualism encourages its members to be independent, emphasizing responsibility and personal rights. While Collectivism is a relatively strict social function tendency in which each individual identifies as a group with loyalty no doubt. According to Hofstede (1980) the majority of people in the world live in collectivist societies, "in which group interest applies to individual interests". Conversely, a small percentage lives in an individualist society. In this society individual interests win over group interests. Individualism refers to independence and emotional independence. Jaggi and Low (2000) suggest that managers in more individual societies tend to disclose more because people in more individualistic societies tend to be more competitive and transparency.

### (4) Maskulinity vs Feminity (MAS)

The dimension of masculinity is related to differences in gender values in society, the different distribution of emotional roles between men and women. The dimension of masculinity in national culture is a form of social behavior that prioritizes competition, power, ambition, assertiveness, tend to seek wealth and other possessions and cultures where society is generally more competitive. While feminity prefers cooperation, humility, concern, and a more consensus-oriented society (collective agreement) (Hofstede et al., 2010). In a very masculine society, managers place great importance on operating performance because good corporate performance gives them more social rewards and personal rewards (Zhang et al., 2015). Gray (1988) argues that masculinity tends to be consistent with transparency. This is because masculinity shows a resolute and oriented society of success that can show a tendency for more publicity. With regard to sustainability reporting, corporate management in countries with high masculinity indexes tends to perform better reporting of sustainability reporting.

### (5) Long Term vs Short Term Orientation (LTO)

Long-term and short-term orientation is the extent of the community's ability to reflect on its potential to analyze a problem. Long-term oriented communities address problems in a flexible and focused way on the future. People in short-term orientations tend to overcome the problem as a whole or partial. The high long-term orientation index of a country implies that the company wants to establish good relationships with stakeholders as a way of maintaining strong ties or cooperation with stakeholders until the future (Khlif, 2016). According to Once and Almagtome (2014) the higher long-term orientation index in a country will lead to higher corporate reporting.

According to Hofstede et al. (2010) the index of power distance (PDI) in Asian countries is higher than in most European countries. If the index of power distance is low then the dependence on the subordinate to the leadership is limited, there is an interdependence relationship between superiors and subordinates and the emotional distance between superiors and subordinates becomes low, and vice versa.

Meanwhile, the uncertainty avoidance index (UAI) tends to be higher in countries in Eastern and Central European, whereas in Asian region has medium to low level, except in Korea which has high UAI. Individualism tends to apply in Western or developed countries, while collectivism prevails in less developed countries and Eastern countries.

With regard to the Index of masculinity, the German state and some Latin countries such as Italy have a high index of masculinity, Western countries that speak high enough English. While countries in Asian tend to have a low index of masculinity. The long-term orientation index tends to be high in Korea and European countries, while short-term orientation is found in Finland and other Asian countries with medium to low levels.

Hofstede (1980) approach has been widely used in accounting studies, one of the most phenomenal is research conducted by Gray (1983). Gray (1983) using models (Hofstede, 1980) on social values and institutional structures by extending them to financial reporting areas. Gray (1983) hypothesize the existence of an accounting sub-culture that states: the value system or behavior of accountants is very likely to be influenced, related and derived from social values.

Gray (1988) points out that culture is an important element in understanding how social systems change because cultures influence both the norms and values of such systems and group behavior in their interactions within and across systems. He states that the term 'culture' is reserved as a whole, for the state, while the term " subculture " is used for organizational, professional, or family level. While acknowledging that the degree of cultural integration varies throughout society, Gray (1988) explores the relationship between culture and international accounting systems at the subculture level. Given that cultural values penetrate a country's

social system, it presents a theoretical argument for the relationship between national culture and the pattern of accounting systems across the country.

## **2.2. Priors Research**

The relationship of national culture (as measured by Masculinity vs. Femininity, Long vs. Short-Term Orientation, Individualism vs. collectivism, power distance, and uncertainty avoidance) with sustainability reportings (financial, environmental and social) has been studied by the following researchers:

[Tsakumis \(2007\)](#) in his studies of companies in Greece and the United States by adopting Hofstede and Gray Framework examined the effect of cultural factors on the application of financial reporting standards. His findings show that accountants in Greece are more covert in expressing the existence of contingent liabilities and assets when compared to accountants in the US. There was also found a strong association between the Gray hypothesis hypothesis and the practice of accounting reporting. Nevertheless, there are no significant differences with respect to professional judgment and recognition of contingent and asset liabilities between the two countries.

[Chand et al. \(2008\)](#) conducted studies on companies in Fiji and Australia based on Hofstede's cultural values to determine the effects of non-cultural and cultural factors on the professional assessment of accountants. The results show that accountants in Fiji are more conservative when compared to accountants in Australia. Furthermore, the results show that the national culture has a significant impact on the way the professional assessment of the accountant.

[Akman \(2011\)](#) in his study of six countries using Hofstede's cultural dimension to investigate whether differences in financial reporting due to culture have diminished after the adoption of IFRS. The results show that the cultural dimensions of individualism, power distance, uncertainty avoidance and masculinity significantly influence the level of corporate finance reporting of the sample. The use of IFRS does not eliminate the cultural impact on financial reportings.

The above studies use individualism / collectivism; power distance; avoidance of uncertainty; masculinity / femininity and / short / long orientation as cultural indicators.

Subsequently [Salter and Lewis \(2011\)](#) in a study of 15 countries using the Gray framework and Hofstede cultural dimensions using data for seven years to determine the relationship between one of Gray's accounting values (and conservatism) and Hofstede's cultural size. The results of the evaluation show that the value of individualism culture is positively and significantly correlated with the differences in the practice of measuring income between countries.

[Adelopo, Ceo Moure, and Obalola \(2013\)](#) in their study used Hofstede's two-dimensional culture to examine the impact of legal origin and culture on Corporate Social Responsibility on major banks in fourteen Western European countries.

The findings show that the origin and culture of state law affect the reporting behavior of banks. Banks in civil law countries make more social reportings about workers and shareholders than banks in the Common law. In addition, banks in the culture of high uncertainty avoidance make more social reporting of banks in the culture of avoidance of low uncertainty. However, no relationship is found between the reporting of corporate social responsibility and the cultural dimension of individualism / collectivism. The study supports institutional and cross-country studies.

[Emeni and Ugbogbo \(2014\)](#) examining different cultural dimensions (Hofstede's power distance and individualism / collectivism) and its impact on accounting reporting practices in Nigeria with 278 sample companies. It was found that collectivism and the dimensions of power distance positively influence the practice of accounting reporting.

Collectivism was found to have a significant effect, while individualism was found to be negatively and insignificantly associated with the practice of accounting reporting in Nigeria.

The banking sector is the focus of this research because the issue of sustainable financing (financial sustainability) is an issue that attracts the world's attention today. According to research [Chowdhury, Datta, and Mohajan \(2013\)](#) in the last two decades of the 20<sup>th</sup> century green finance has become an interesting issue in finance and banking.

In addition, the Commission action plan on sustainable finance in European has developed a comprehensive strategy for linking finance with sustainability as a follow-up to the establishment of the High Level Expert Group on Sustainable Finance in December 2016. For this reason, this study will conduct analysis on both groups of countries, European and Asian (as a group of developing countries) to identify whether there are differences in sustainability reporting by banks in both groups of countries.

Research conducted by [Kanagaretnam, Lim, and Lobo \(2014\)](#) is a study that also examines the influence of culture on accounting practices in banking, especially risk taking.

Using samples of international banks and country-level indices for individualism and uncertainty avoidance as a proxy for national culture, they study how differences in cross-country cultures affect accounting conservatism and risk taking of banks. Consistent with expectations, cross-country analysis shows that negative (positive) individualism is related to conservatism (risk-taking) and avoidance of uncertainty

positively (negatively) related to conservatism (risk-taking). It was also found that a culture that encouraged higher risk taking experienced more bank failures and bank problems during the recent financial crisis.

This research will contribute to research on cultural relevance to sustainability reporting. With regard to sustainability measurement, this study uses GRI sector supplement for financial services. Based on the best knowledge of the researchers this instrument is different from previous studies that mostly use general GRI guidelines.

Another update of this study is in the context of comparing two regions of Asian and European which, according to Hofstede et al. (2010) European countries are countries that tend to have low power distance index, high uncertainty avoidance, high individualism, high masculinity and long-term orientation is also relatively high. The Asian group of countries are countries that tend to have high power distance index, low uncertainty, low masculinity and low long-term orientation. Based on what was previously described, this research formulates the hypothesis:

H1: Sustainability reporting index for banks in European is higher than in Asian.

H2: There are differences sustainability reporting index in each category (economy, environment, social) between banks in Asian and European.

H2: There are differences in sustainability reporting index between banks in Asian and European.

### 3. Research Method

#### 3.1. Population, Sample and Data

The population of this study are banks in Asian and European that publish GRI reports. There are 56 banks in Asian that publish GRI reports, and 81 in European. Of 56 banks in Asian, 31 banks make reports not in English. While from 81 banks in European, the sample is only 34, because 47 banks do not provide reports in English. So the total sample becomes as much as 65 banks.

The analysis focuses on banking in the Asian and European region which comes from 33 countries ie 15 Asian countries and 18 from European. The data obtained from the annual report of each bank with the focus of the study period is 2016.

**Table-1.** Countries of Research Sample.

No	Asian	Total	No	European	Total
1	Bangladesh	3	1	Belgium	1
2	Indonesia	6	2	Finland	2
3	Cambodia	1	3	France	4
4	India	4	4	Greece	1
5	Israel	1	5	Germany	1
6	Jordan	1	6	Great Britain	1
7	Korea Republic	1	7	Italy	3
8	Malaysia	2	8	Luxembourg	1
9	Philippines	4	9	Netherlands	6
10	Qatar	1	10	Portugal	1
11	Singapore	1	11	Poland	1
12	Saudi Arabia	1	12	Russian	1
13	Thailand	3	13	Slovakia	1
14	UAE	1	14	Spain	1
15	Vietnam	1	15	Sweden	4
			16	Switzerland Fr	2
			17	Switzerland Gr	1
			18	Turkey	1
	Total	31		Total	34

**Table-2.** Categories of Reporting under the Financial Service Sector Supplement.

No	Categories	Sub categories	Item	Reporting	
1	Economy	Economy Performance		G4-DMA; G4-EC1	
2	Environment	Emission		G4-EN15; G4-EN16 G4-EN17	
		Waste		G4-EN23	
3	Social	Occupational health and Safety	Worker health and safety	G4-LA5; G4-LA6; G4-LA7; G4-LA8	
		Human Right	Investment	G4-HR1	
		Community	Local Communities	FS13; FS14	
		Product responsibility	Portofolio Product		FS1; FS2; FS3; FS4 FS5;FS6; FS7; FS8
			Audit		FS9
			Active Ownership		FS10; FS11; FS12
Labelling product and Service		FS15; FS16			

Source: GRI (2014).

This study uses the GRI financial services supplement sector as a measure of sustainability reporting index. The use of this instrument is expected to measure the sustainability reporting index that should be done by banks. GRI Financial Service Sector Supplement consists of 27 items in 3 categories namely economic, environmental and social. Social category consists of 4 sub-categories, namely employment practices and comfort work, human rights, community and responsibility for the product.

This study uses content analysis which is a method of codifying text (or content) of a piece of writing or category depending on the selected criterion (Krippendorf, 1989). Content analysis are widely used in corporate social reporting research such as (Aribi & Gao, 2010), (Mallin, Farag, & Ow-Yong, 2014), (Beattie, 2014), (Qiu, Shaukat, & Tharyan, 2016), (Yook, Song, Patten, & Kim, 2017).

The Sustainability Reporting Index is calculated as follows:

$$SRDI = \frac{\text{Total item Disclose}}{\text{Total item Expected Disclose}} \times 100$$

Reliability and validity in content analysis refers to the measurement procedure, which ensures to give the same results on repetitive traces. In other words, reliability and validity are determined to ensure that different researchers will encode the text in the same way and therefore reduce the likelihood of inaccuracy and bias. A number of steps are taken to ensure reliability.

The Cronbach coefficient has been used for internal consistency sustainability reporting checks. The Cronbach coefficient  $\alpha$ , is an internal consistency measure that uses repeatable measurements to assess the extent to which correlations between measurements are attenuated to random error (Botosan, 1997). For each category, the value of the Cronbach  $\alpha$  coefficient is 0.624, which is sufficient at an acceptable level.

#### 4. Findings and Discussion

This section presents statistics descriptive of the mean values of power distance index, uncertainty avoidance index, individualism vs collectivism index, masculinity vs femininity index, and long term orientation vs short term index in the Asian and European region Table 3.

**Table-3.** Mean of Cultural Dimension Index.

Region	PDI	UAI	IDV	MAS	LTO
	Index	Index	Index	Index	Index
Asian					
Mean	73,6	53,2	29,6	48,73	48,53
European					
Mean	55,78	73,17	60,17	50,83	59,55

Source: Hofstede et al. (2010).

The result in Table 3 show that mean of power distance index in Asian is higher than in European. While the mean of uncertainty avoidance index, individualism vs. colectivism, masculinity vs. femininity and long term orientation are higher in the European region than in the Asian region.

**Table-4.** Descriptive Statistics.

	N	Mean	Std. Deviation	Minimum	Maximum
Sustainability Reporting Index	65	42,5646	17,81247	11,11	96,30
Country	65	1,52	,503	1	2

Data in Table 4 shows that sustainability reporting index has mean of 42.5646, minimum value 11.11 maximum values 96.30 with standard deviation 17.81247. The highest sustainability-reporting index, 96.3 is from Italy, while the lowest is from Philippines (11.11). This data indirectly shows that sustainability reporting index in European countries is higher than in Asian countries.

A summary of the sustainability reporting index by banks in Asian and European is presented in Table 5. Overall the index of sustainability reporting is higher in banks in European than in Asia. The mean of sustainability reporting index in banks in European is 49.7826 while in Asian 34.6481. This finding supports the first hypothesis that the average sustainability reporting index in banks in European is higher than in Asian.

**Table-5.** Descriptive Sustainability Reporting Index.

	Asian	European
Mean	34.6481	49,7826
Median	29.6300	48,1500
Maximum	77.78	96,30
Minimum	11.11	22,22
St. Dev	15.84552	16,56901

Countries in European tend to have high levels of uncertainty avoidance. Zhang et al. (2015) states to reduce the impact of uncertainty avoidance then they will use more technology and regulations. This is indicated in the presence directive on the disclosure of non-financial and diversity information (Directive 2014/95/EU) issued by European Union.

Further followed by rules issued by various countries in European, such as Sustainability and Diversity Improvement Act 257/ME (Austria), Legislative Decree 30 December 2016, n. 254 (Italy), Decree Disclosure of Non-financial Information PbEU, 2014, L330 and Decree Disclosure Diversity Policy PbEU, 2014, L330 (Netherlands), Corporate Reporting on Sustainability and Diversity Policy CU2 (Sweden) and many more. The existence of these rules encourages companies in European to publish sustainability reports

Table 6 show the mean, median, minimum and maximum values of each category of sustainability reporting ie economic, social and environmental in each region.

**Table-6.** Descriptive Sustainability Index per Category and Regions.

No	Category		Asian	European
1	Economy	Mean	88,7097	83,8235
		Median	100	100
		Maximum	100	100
		Minimum	50	50
		St. Dev	21,25119	23,7429
2	Environment	Mean	52,4194	76,4706
		Median	50	75
		Maximum	100	100
		Minimum	0	25
		St. Dev	37,27982	22,14037
3	Social	Mean	26,2965	41,1774
		Median	23,81	38,1
		Maximum	76,19	95,24
		Minimum	4,76	0
		St. Dev	19,70791	21,16272

The data in Table 6 illustrate for the economic category banks in Asian has a higher sustainability reporting index than in European. But in the environmental and social categories, banks in European has a higher sustainability reporting index than Asian. This show that banks in Asian pay more attention to the reporting of sustainability related to economic aspects than environmental and social aspects. While banks in

European countries are already at a more advanced stage with more attention to social and environmental issues. This is in accordance with what is conveyed by [Christofi et al. \(2012\)](#) and in harmony with the research result ([Emeni & Ugbogbo, 2014](#)). This finding also supports what [Once and Almagtome \(2014\)](#) that if the level of power distance in a country is high then the level of environmental reporting conducted by the company is low.

Furthermore the normality test performed on the data, indicating that the data is not normally distributed. Therefore, the Mann-Whitney U test is used to examine the differences in sustainability reporting index both in whole and in each category, economic, environmental and social. Mann-Whitney U test results can be seen below in the [Table 7](#).

**Table-7.** Ranks Mann-Whitney Test by Sustainability Category.

<b>Ranks</b>				
	Country	N	Mean Rank	Sum of Ranks
Economy	Asian	31	34,66	1074,5
	European	34	31,49	1070,5
	Total	65		
Environment	Asian	31	26,77	830
	European	34	38,68	1315
	Total	65		
Social	Asian	31	25,24	782,5
	European	34	40,07	1362,5
	Total	65		

[Table 7](#) illustrates the mean rank for each category of banking sustainability reports in Asian and European. [Table 7](#) shows that banks from Asian countries have higher indexes for economic categories compared with banks in European. As for social and environmental categories, banks from European countries have higher indexes than Asian banks.

**Table-8.** Mann Whitney U Test P Value.

	<b>Economy</b>	<b>Environment</b>	<b>Social</b>
Mann-Whitney U	475,500	334,000	286,500
Wilcoxon W	1070,500	830,000	782,500
Z	-,873	-2,638	-3,178
Asymp. Sig. (2-tailed)	,383	,008	,001

a. Grouping Variable: Country.

Mann-Whitney U test results in [Table 8](#) shows that there is a significant differences mean rank sustainability reporting index for environmental and social categories in both region, Asian and European. This is evidenced by the value of significance (p value) 0.008 <0.05 and 0.001 <0.05. While for the economic category there is no significant differences between the two countries (p> 0.05).

The analysis to examine the differences in sustainability reporting index as a whole is shown in [Table 9](#) and 10.

**Table-9.** Ranks Mann-Whitney Test.

	Country	N	Mean Rank	Sum of Ranks
Sustainability Reporting Index	Asian	31	23,73	735,50
	European	34	41,46	1409,50
	Total	65		

[Table 9](#) shows the mean rank sustainability-reporting index in each country. The mean rank in European is higher (41.46) than the mean rank in Asian (23.73). To verify whether this mean rank difference is statistically significant can be seen in [Table 10](#).

**Table-10.** Mann Whitney U Test P Value.

<b>Test Statistics<sup>a</sup></b>	
	Sustainability Reporting
Mann-Whitney U	239,500
Wilcoxon W	735,500
Z	-3,789
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Country.

Table 10 shows a U value of 239.5 and a W value of 735.5. When converted to a value of Z the magnitude is -3.789. The value of Sig or P Value is 0.00 <0.05. This means that there is a meaningful difference between the two groups or which means the third hypothesis is accepted.

This means that hypothesis 3 states that there is a difference in the index of sustainability reporting between the two areas accepted.

This finding supports the conceptual framework proposed by Khlif (2016) that national culture can play an important role in shaping the behavior and management orientation in relation to resource allocation and company reporting policies, including sustainability reporting.

In this case, Armstrong, Wayne, and Joseph (2010) says that accounting does not operate in a vacuum: it is the 'product of its environment'. Thus, culture is an important factor in the environment and thus the difference in cultural values can have a significant impact on accounting practices.

## 5. Conclusion

This study provides an explanation of the cultural relevance of sustainability reporting. The relevance described between sustainability reporting and national culture, for most hypotheses, is consistent with that portrayed by Hofstede's theory.

Confirmation of the first hypothesis states that the reporting of banking sustainability in European is higher than in Asian is proven. Although tests on the second hypothesis show that this is not the case in every reporting category. For economic category, Asian is higher than European although this is not significant. Confirmation of the second hypothesis also proves that for the environmental and social categories there are significant differences between the two regions.

With regard to the third hypothesis, it is predicted and confirmed that culture in a country has significant relevance to the sustainability reporting conducted by banks. For banks in countries with cultural characteristics: low power distance index, high uncertainty avoidance, high masculinity, high individualism and long term orientation are likely to make high sustainability reporting, and vice versa. This clearly proves Hofstede's theory.

## 6. Research Limitations and Suggestion for Future Research

Limitations relate to the data and methods applied. With regard to data, Hofstede dimensions were identified and developed over 30 years ago and no development over time with dimensional scores. It can be assumed that developing countries specifically in Asian may have undergone changes in the national cultural dimension.

As stated by Orij (2010) that Hofstede's cultural dimensions scores may experience some changes especially in developing countries where the state of development has witnessed significant changes compared to 30 years ago. Another limitation is the number of samples that may cause data to be abnormal because many published sustainability reports do not use English. To overcome the limitations of samples, further research can expand the research by expanding the research area such as involving banks from countries other than Asian and European.

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