

## The Effect of Cultural Descriptive Norms on Financial Systems: A Cross-Cultural Analysis

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### Kültürel Tanımlayıcı Normların Finansal Sistemler Üzerindeki Etkisi: Kültürlerarası Bir Analiz

#### Abstract

We investigated the effect of descriptive, cultural norms on national financial systems by comparing the incentive for achievement and risk-aversion attributes of 32 different nations' cultures. Multiple regression analyses showed that performance and future orientation positively relate to market capitalisation, but institutional collectivism and uncertainty avoidance negatively correlate. Performance orientation boosted market capitalisation, but institutional collectivism, whereas uncertainty avoidance hindered it. We could not find any relationship between the cultural norms and the bank deposit ratios. Two steps scatter plot analysis showed clusters between cultural norms, bank deposit, and future orientation norms.

**Keywords** : Descriptive Cultural Norms, Financial Systems, Bank-Based Systems, Capital Market-Based System, Risk-Taking.

**JEL Classification Codes** : G15, Z13.

#### Öz

Bu çalışmada, 32 farklı ulusun kültürünün başarı ve riskten kaçınma teşviklerini karşılaştırarak kültürel tanımlayıcı normların ulusal finansal sistemler üzerindeki etkisini araştırdık. Çoklu regresyon analizleri, performans yönelimi ve geleceğe yönelimin piyasa değeri ile pozitif ilişkili olduğunu, ancak kurumsal kolektivizm ve belirsizlikten kaçınmanın negatif ilişkili olduğunu göstermiştir. Performans yönelimi, piyasa kapitalizasyonunu artırdığını, ancak kurumsal kolektivizm, belirsizlikten kaçınmanın piyasa kapitalizasyonunu azalttığını gördük. Kültürel normlar ile banka mevduat oranları arasında herhangi bir ilişkiye rastlamadık. İki aşamalı dağılım grafiği analizi, kültürel normlar, banka mevduatı ve geleceğe yönelik yönelim normları arasındaki kümeleri göstermektedir.

**Anahtar Sözcükler** : Tanımlayıcı Kültürel Normlar, Finansal Sistemler, Banka Tabanlı Sistemler, Sermaye Piyasası Tabanlı Sistemler, Risk Alma.

## 1. Introduction

In modern economies, financial systems are critical for how growth is supported and how resources are allocated. The financial system serves as a bridge for transferring household savings to firms through banks or stock markets. However, cross-country differences exist in how households prefer alternative use of banks versus stock markets for investing their savings (Kwok & Tadesse, 2006; Barth et al., 1997). From an organisational perspective, the relative use of alternative financial systems, especially the use of the stock market, is important in the development of organisations (Whitley, 1991). As Whitley (1991) argued, in stock-market-based countries, capital is more easily converted into cash, which affects the development of business organisations in the country.

There are three approaches to explaining the differences across countries' financial systems. First, Pagano and Volpin's (1999) political approach looks at how the attitudes of governments based on corporatism, labour market coalitions, and the biases of workers and employers affect how the financial markets change. Too many studies have shown a strong link between political and financial risks. Their substantial contributions to the political approach are that increases in political risk raise financial risks (İltaş & Üçler, 2021; Çiçen, 2021; Nakhli & Gaines, 2021). Secondly, the legal approach investigates how countries' legal systems differ to protect shareholder rights, make the companies and stock market more transparent, and prevent unethical behaviour in the stock market, such as insider trading, as a result of the development of the capital market (La Porta et al., 1997, 1998, 2000). Thirdly, the cultural approach developed by Stulz and Williamson (2000) investigated how established beliefs and risk-taking attitudes affect the differences in developing bank-based or market-based financial systems among different societies.

Several studies document different financial systems among countries regarding the points above. For instance, Barth et al. (1997) compared five industrialised nations in research (United States, United Kingdom, Japan, France, and Germany). This study revealed significant differences in how countries' financial systems are organised. For instance, the United States and Germany represent the polar extremes of different financial systems. In the U.S, the bank-based system is relatively trivial; the ratio of bank assets to GDP is 53%, which is roughly one-third of the 152% ratio in Germany.

In contrast, the United States has a ratio of stock market capitalisation to GDP of 82%, which is three times the German ratio of 24%. Japan and France have a more bank-based financial system than the United States and Germany. Still, the United Kingdom has a stock market-based financial system similar to the United States. Similarly, Rajan and Zingales (1998; 2001) and Demirgüç-Kunt and Levine (1999) stated similar findings that countries with weaker legal systems tend to have more bank-based financial systems, whereas countries that have stronger protection of shareholder rights tend to have a more market-based financial system. Kwok and Tadesse (2006) were the pioneering researchers investigating culture's effects on financial markets. They found that, as a cultural value, uncertainty avoidance is an important determinant of a country's financial system.

According to this research, countries that are high on uncertainty avoidance tend to have more bank-based financial systems compared to countries that are low on uncertainty avoidance with a risk aversion explanation.

While these studies are important in shedding light on the cross-country and cross-cultural differences in financial systems, the literature is still lacking from a cross-cultural perspective. Firstly, the missing part is other cultural value dimensions such as individualism-collectivism or from globe framework performance orientation. Moreover, within the scope of the cross-cultural research framework, in recent years, it has been claimed that norms rather than values are more relevant predictors of behaviour (Shteynberg et al., 2009; Gelfand et al., 2011; Aktas et al., 2016; Stephan & Uhlaner, 2010). And the research stream can also be further developed using descriptive norms rather than values.

Therefore, this study aims to extend the cross-cultural financial systems literature by using descriptive, cultural norms, namely performance orientation, institutional collectivism, uncertainty avoidance, and future orientation, and investigating their effects on market capitalisation and bank deposits.

## **2. Theoretical Framework**

### **2.1. Financial Systems**

A financial system has two primary goals: to channel resources to the most productive uses and place risks where they are best borne (Rajam & Zingales, 2001). Economies seem to emphasise either institutions or markets, and this has led economists to classify financial systems as relationship-based (or bank-dominated) and arm's-length (or market-based) financial systems (Rajam & Zingales, 2001; De Jong & Semenov, 2002).

Financial markets, especially debt and stock markets, are markets where an increase in investments facilitates fast economic growth by moving surplus or inefficiently utilised funds to those in need of cash. There are many financial markets, mainly commercial and investment banks, insurance companies, and investment funds, except regulated governmental organisations (Mishkin & Eakins, 2012). The banking sector hosts tools that directly finance companies' investments through the credit channel, just as in the borrowing market. The operating mechanism of capital markets, namely stock markets, is built on partnerships. Financial markets aim to assist enterprises needing cash by connecting them with idle funds in capital markets or somewhat risk-loving investors.

It would appear that countries' legal systems are a critical factor in explaining the differences in countries' financial systems (Rajam & Zingales, 1998; 2001). Rajam and Zingales (1998; 2001) argue in their research that the banking sector forms extra-legal contractual links with the market forces of nations that govern themselves with poor regard for the rule of law and the sanctions imposed on it their citizens. As a result, they stated that the entity itself is responsible for handling financial transactions (internalisation). For this reason, bank-based financial systems are being supported, and market-based systems are

being developed in the standard rule of law and sanction-imposing countries. According to the findings of Demirgüç-Kunt and Levine's (1999) research on the relationship between the legal framework and financial systems in countries with robust systems for the protection of minority shareholders, these countries have a higher tendency toward market-based financial systems. (Demirgüç-Kunt & Levine, 1999). While legal-based explanations acknowledge that having a strong shareholder protection regulation for boosting the stock markets is initially required, behavioural explanations do not. A centric risk-based approach focuses on the risk reduction capabilities of financial systems. Therefore, this approach assigns a key role to the bank sector to smooth financial risks over time (Allen & Gale, 1997; Dow, 2000; Dowd, 2009). While individual investors may suffer from the risks, such as oil risks mentioned by Allen and Gale (1997) during the oil crisis or, more recently, during the COVID-19 Pandemic, investors in banks did not have any losses because of the decline in the stock market price. As a result, we might reach the following conclusion: different financial systems have varying possibilities for both gains and losses and hence, other risks.

As a result of individuals' risk-taking tendencies, a negative relationship was found between the stock market's development and the banking sector's success in the Japanese and Chinese economies. Stock markets with high market capitalisations interrupting the funding functions of the banking sector have been found to reduce profit margins and bank performance. As a result of the complex interactions between the capital and banking markets, as well as countries with different legal and political systems and cultural norms, the study's hypotheses can be supported (Liu & Wilson, 2009; Tan & Floros, 2012).

In this study, we aim to monitor the cultural differences of investors through the inter-country GLOBE data discussed and to reveal the findings of the developmental differences in financial markets. In this regard, the novel approach of the study is to examine how the value attached to the capital and banking markets differs according to cultural values. The relationship between the increase in the market capitalisation and the economic growth in the concerned countries is an indicator that the short-term idle funds, one of the most important targets of financial markets, are transferred to long-capital markets and that investments in this area contribute significantly to the growth of the national economies.

## **2.2. The Role of National Culture in Financial Systems**

Hofstede (1980) defines culture as a society's shared values, beliefs, and norms that distinguish it from others and are passed down through social learning to succeeding generations. Culture affects the attitudes and behaviours of the individuals within the same society, including how people are motivated, satisfied, connected, how people learn, the type of leaders they prefer, etc. (Hofstede et al., 1990). Related to our argument, culture is important in determining a society's risk-taking intentions for potential gains and losses (Hofstede, 1980; House et al., 1997). The existing research well documented this (Li et al., 2013; Kreiser et al., 2010; etc.). Regarding the financial system, stock market investment has the potential for higher gains and losses than banking and carries risk for investors. In contrast, bank investments guarantee specific interest rates for the period, predictable

income, and potentially fewer gains but no losses, much lower risks. Compared to bank depositors, capital market investors have a greater risk tolerance and profit motivation due to the systemic and systematic nature of the market and their greater exposure to risk. Under conditions of risk, uncertainty, and ambiguity, it is the primary duty of policy-making mechanisms and regulatory institutions to extend the forecast period of decisions taken by economic agents and to make them measurable (De Jong & Semenov, 2002; Liu & Wilson, 2009; Mishkin & Eakins, 2012; Tan & Floros, 2012; Enciso et al., 2016; Saraç et al., 2016). Therefore, risk-taking and tolerating the ambiguity of gains and losses is an important part of the national financial systems (Kwok & Tadesse, 2006). It can be argued that, in addition to the legal system and uncertainty avoidance, other cultural phenomena such as performance orientation, institutional collectivism, and future orientation might affect the country's financial systems through their effect on encouraging proactive behaviour, monetary gains, and risk-taking. This, in turn, will characterise society's financial system.

### **2.3. Cultural Descriptive Norms**

Culture is an important phenomenon in explaining cross-national differences (Hofstede, 1980; Gelfand, 2011). Before the ground-breaking work of Hofstede (1980), cross-national differences have also been investigated by scholars. However, because these studies used the country as a proxy, they did not provide a detailed explanation for why the differences exist (Gelfand, 2011). After the work of Hofstede (1980), values are seen as the most important component of culture. They have begun to explain differences across nations in managerial, organisational, and other social phenomena.

In his 1980 research, Hofstede introduced four cultural value dimensions: power distance, uncertainty avoidance, masculinity and femininity, and individualism and collectivism. In 1991 and 2008, he added the long-term orientation and indulgence dimensions, respectively. Hofstede's (1991) cultural value dimensions are the predominant framework in the cross-cultural study. House founded the Globe (Global Leadership and Organizational Behaviour Effectiveness) research program in 1991. The program, run in 62 countries, distinguished cultural practices and values and put forward nine dimensions of cultural value and descriptive practices (House et al., 2004). These dimensions are power distance, uncertainty avoidance, gender egalitarianism, assertiveness, performance orientation, in-group collectivism, and institutional collectivism.

The most notable distinction of the Globe study is that it pioneered a new path in organisational and cross-cultural research by distinguishing values and norms. Norms are the rules and standards that regulate conduct in a society (Gelfand et al., 2011).

This study will apply descriptive norms (practices, or "as is" measures of GLOBE) to measure the cultural differences rather than values. Since then, in recent years, research has demonstrated that cultural norms are a more important predictor of behaviour than values (Gelfand et al., 2011; Gelfand & Harrington, 2015; Aktas et al., 2016). The value approach acknowledges that the country's culture is likely to statistically measure the scores of the

participants' individual preferences (Hofstede, 2001). In contrast, descriptive, cultural norms are measured by describing the participants' typical behaviour in their cultural belongings (Fischer, 2006; Fischer, 2009; House et al., 2004; Shteynberg et al., 2009). Before predicting social level ratings, numerous definitions of participants' ethnocentric classes should be statistically and collectively analysed (Fischer, 2009; House et al., 2004). In contrast to examining values (e.g., national culture to predict national entrepreneurship rate), descriptive norm differences are better reflected at the societal level, as shown by these findings (Arthur et al., 2007; Fischer, 2008; Klein & Kozlowski, 2000).

Regarding the difference between the meanings of values and descriptive norms, we contend that values are logically considered to have a tenuous relationship with financial systems due to their weaker connection with behaviour, as individuals do not act according to their definitions of personal preferences (e.g., Swidler, 1986; Verplanken & Holland, 2002; Wicker, 1969). In contrast, too many studies in the extant literature suggest the normative impacts of descriptive norms on people living in particular cultural forms (e.g., Fischer, 2006; Shteynberg et al., 2009). Some societal-level research on cultural norms has yielded poor and inconsistent results regarding values (Fischer, 2006; House et al., 2004; Javidan et al., 2006; Peng et al., 1997; Van Oudenhoven, 2001).

#### **2.4. Cultural Descriptive Norms and Financial System: Hypothesis Development**

Of the nine cultural descriptive norm dimensions, in this paper, we will focus on four dimensions: performance orientation, institutional collectivism, uncertainty avoidance, and future orientation, which are important in determining the investment attributes and risk-taking profiles of society.

Performance orientation is the degree to which a collective encourages and rewards group members for performance improvement and excellence (House et al., 2004). Societies with a high-performance orientation tend to value materialism, reward performance, achieve goals and emphasise what you do more than who you are. In contrast, societies with a low-performance orientation tend to value societal and family relationships, have deep concerns for the quality of life and emphasise who you are more than what you do (House et al., 2004). Research has shown that performance-based cultures are supportive of entrepreneurial orientation because of the motivation of high performance and achievement (Stephan & Uhlaner, 2010). On the investment side, while the bank-based systems offer investors a reasonable (a nominal interest rate approximately equal to or greater than the currency price index) and risk-free return (without having a counterparty risk or suffering moral hazard), the stock market-based systems aim to attract more risk-loving investors who consider that the higher the risk, the higher the potential return (Rajam & Zingales, 1998; Demirgüç-Kunt & Levine, 1999). Hence, it can be argued that the market-based financial system will be the entire financial system in a society that encourages risk-taking for achievement. Contrarily, a bank-based financial system will be less preferred because of the lack of competition and

reward for performance. Hence, our hypotheses regarding performance orientation and the financial system are as follows:

*Hypothesis-1. The more performance-oriented the society is, the more market-based financial system the society will have.*

*Hypothesis-2. The more performance-oriented the society is, the less bank-based financial system the society will have.*

Secondly, "institutional collectivism" is defined as "the degree to which organisational and societal institutional practices encourage and reward collective distribution of resources and collective action" (House et al., 2004: 30). The dependence between the individual and the organisations, the superiority of the group goals to individual goals, rewarding people according to seniority, personal needs, and group equity rather than performance are the main characteristics of institutional collectivist societal practices. Moreover, society's economic system tends to maximise the interests of collectives rather than individuals. Therefore, more individual achievement-oriented stock-market-based investments can be a less preferred investment for institutional collectivist societies whose economic system encourages the collective distribution of resources rather than a merit-based system (House et al., 2004; Hofstede, 1980). Hence, our hypotheses are as follows:

*Hypothesis 3: The more institutional collectivist the society is, the more bank-based financial system the society will have.*

*Hypothesis 4: The less institutional collectivist the society is, the more market-based financial system the society will have.*

Our following argument is about the relationship between uncertainty avoidance, descriptive, cultural norms, and financial systems. It is "the extent to which a society, organisation, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events" (House et al., 2004: 30). Uncertainty-avoidance societies are characterised by being orderly, relying on formal policies and procedures, being formal in relationships, and being change-resistant (House, 2004; Hofstede, 1980; 1991). Regarding our argument, the most important characteristic of uncertainty avoidance cultures is their risk avoidance (Hofstede, 1980; 1991; House et al., 2004). Uncertainty-avoidant societies do not like risks and ambiguity; when they face uncertainty, they feel anxious. These societies prefer predictability and order (Hofstede, 1980; 1991).

On the other hand, in terms of individual investments, while the stock market is volatile and stock investment is risky and bears uncertainty in earnings, bank loans offer predetermined interest rates and constant income (Kwok and Tadesse, 2006). Therefore, we can conclude that a society with high uncertainty avoidance will prefer more bank-interest-based investments. As a result, society will have a more bank-based financial system. A society that is more tolerant of ambiguity will take more risks and prefer more stock market investment; as a result, society will have a market-based financial system. As a result, our

hypotheses regarding uncertainty avoidance and financial system relationships are as follows:

*Hypothesis 5: The more uncertainty avoidant the society is, the more bank-based financial system the society will have.*

*Hypothesis 6: The less uncertainty avoidant the society is, the more market-based financial system the society will have.*

Our final argument is about future-oriented cultural descriptive norms. "Future orientation" is defined as "the degree to which a collectivity encourages and rewards future-oriented behaviours such as planning and delaying gratification" (House et al., 2004: 282). Emphasis on long-term success, saving for the future, and seeing material success and spiritual fulfilment as integrated are the most important characteristics of the future-oriented culture (House et al., 2004). Stephan and Uhlaner (2010) stated future orientation as a performance-oriented cultural characteristic. Coget (2011) has found a link between future orientation and firms' investment in training and development. Another study has found that future orientation is directly linked to young adults' savings practices, and the more future-oriented individuals are, the more they save for the future (Webley & Nyhus, 2013). While future orientation increases performance-oriented behaviour and savings, this might link with market capitalisation and bank deposits. Hence, it can be argued that a higher level of savings in a future-oriented society will develop both the stock market and bank deposits. Therefore, our hypotheses regarding future-oriented cultural descriptive norms are as follows.

*Hypothesis 7: The more future-oriented the society is, the more market-based financial system the society will have.*

*Hypothesis 8: The more future-oriented the society is, the more bank-based financial system the society will have.*

### **3. Methodology**

In this study, secondary data from several sources were utilised. The data collection contains relevant economic indicators and cultural practices for 32 countries.

**Table: 1**  
**Countries, Variables and Values in the Dataset**

	<b>Countries</b>	<b>Code</b>	<b>UApr</b>	<b>ICpr</b>	<b>POpr</b>	<b>FOpr</b>	<b>MC</b>	<b>BD</b>	<b>WGI</b>
1	Argentina	ARG	3,63	3,66	3,63	3,1	15,50119843	17,93990625	73,4
2	Austria	AUT	4,4	4,31	4,37	4,09	30,61712917	72,87315	50,2
3	Brazil	BRA	3,74	3,94	4,11	3,9	50,32163283	50,45845	73,3
4	Chile	CHL	4,81	4,67	4,37	3,68	105,7414505	46,25565625	68,6
5	China	CHN	3,84	3,95	4,1	3,64	54,21180873	44,6738875	67,3
6	Costa Rica	COS	4,66	4,2	4,43	3,74	5,838257331	22,5012125	60,6
7	France	FRA	4,66	4,2	4,43	3,74	78,19562187	71,84406875	52,8
8	Germany	GER	5,19	3,67	4,16	4,04	45,00905753	71,38820625	52,4
9	Greece	GRC	3,52	3,41	3,34	3,53	37,43048469	80,34425625	52,0
10	Hong Kong	HKG	4,17	4,03	4,69	3,88	896,2339404	289,4628125	45,8
11	Hungary	HUN	3,26	3,63	3,5	3,31	20,54936589	44,49080625	65,6
12	India	IND	4,02	4,25	4,11	4,04	76,25880442	58,09780625	68,0
13	Indonesia	IDN	3,92	4,27	4,14	3,61	37,71052206	32,96318125	71,6
14	Ireland	IRE	4,25	4,57	4,3	3,93	47,16301065	84,49249375	49,3
15	Israel	ISR	3,97	4,4	4,03	3,82	74,33341244	77,65359375	49,8
16	Japan	JPN	4,07	5,23	4,22	4,29	81,58287547	199,71125	53,3
17	Kazakhstan	KAZ	3,76	4,38	3,72	3,72	19,60694844	24,9584625	67,2
18	Korea (South)	KOR	3,52	5,2	4,53	3,9	81,28082413	69,8718625	62,1
19	Malaysia	MAL	4,59	4,45	4,16	4,39	137,5784969	113,10625	68,6
20	Mexico	MEX	4,06	3,95	3,97	3,75	32,20373669	23,89240625	74,3
21	New Zealand	NZL	4,86	4,96	4,86	3,46	34,91048418	92,90900833	51,8
22	Nigeria	NGA	4,14	4	3,79	3,95	12,43201072	14,52747813	74,1
23	Philippines	PHL	3,69	4,37	4,21	3,92	62,17128309	52,137575	69,8
24	Poland	POL	3,71	4,51	3,96	3,23	31,33589282	44,6170375	68,6
25	Portugal	POR	3,96	4,02	3,65	3,77	34,50675482	81,85933125	45,1
26	Slovenia	SVN	3,76	4,09	3,62	3,56	22,25287738	50,5317875	62,5625
27	South Africa	SAF	4,64	4,47	4,72	4,66	236,4250542	56,0450125	79,1875
28	Spain	SPA	3,95	3,87	4	3,52	79,52542115	88,7565125	52,7
29	Switzerland	SWI	5,42	4,2	5,04	4,8	213,6167004	136,7897333	48,3
30	Thailand	THA	3,79	3,88	3,84	3,27	77,18072814	101,6174375	68,625
31	Turkey	TUR	3,67	4,02	3,82	3,74	26,70963513	39,8388	72,125
32	United States	USA	4,15	4,21	4,45	4,13	126,5976768	75,07030625	56,375

**Notes:** *UApr:* Uncertainty avoidance practices; *ICpr:* Institutional collectivism practices; *POpr:* Performance orientation practices; *FOpr:* Future orientation practices; *BD:* Bank deposits; *MC:* Market capitalisation; *WGI:* World Governance Index.

### 3.1. Measures

#### 3.1.1. Dependent Variables

**Market Capitalization to GDP:** National-level market capitalisation values are derived from the World Bank. And it is a measure of the country's market value as a proportion to GDP. All the country measures used in this study are average values between 2002 and 2017. We used averages rather than annual data since we believe it will reduce the effect of the yearly fluctuations, which might happen because of country-specific problems.

**Bank Deposits to GDP:** Country-level bank deposit statistics are derived from the Federal Reserve Bank of St. Louis. The value is the proportion of a country's bank deposits to GDP. Country values are the average of 2002-2017 to eliminate the effect of annual fluctuations.

#### 3.1.2. Independent Variables

**Cultural Descriptive Practices:** Data regarding societal culture, namely performance orientation, institutional collectivism, and uncertainty avoidance, were obtained from the GLOBE study (House et al., 2004). Sample items for the societal practices

scales include "In this society, orderliness and consistency are stressed, even at the expense of experimentation and innovation (uncertainty avoidance)"; "In this society, teenaged students are encouraged to strive for continuously improved performance (performance orientation)", and "The economic system in this society is designed to maximise (1) individual interests and (7) collective interests (institutional collectivism)". "In this society, people place more emphasis on (solving current problems: 1; planning for the future: 7) (Future orientation)." (For more detailed information about the GLOBE scales and the methodology used to develop them, see Hanges & Dickson, 2004; House & Hanges, 2004).

### 3.1.3. Control Variables

**World Governance Index (WGI):** The World Government Index is a composite of six indicators: Voice and Accountability; Political Stability; Absence of Violence and Terrorism; Government Effectiveness; Regulatory Quality; and Corruption Control. With the inclusion of the WGI variable, the political and legal approach developed by Pagano and Volpin (1999) and La Porta et al. (1997, 1998, 2000), we could consider the development of the financial markets through these approaches. The cultural approach created by Williamson and Stulz (2000) allows us to investigate the relationship between cultural components and the banking sector and stock markets about the study's primary research issue about the GLOBE variables. According to Soumaré and Tchana (2015), stock markets have developed in countries where investors are legally protected, and administrative laws are complete. And this is why research has demonstrated the importance of the legal environment in investment decisions. In their study, Donadelli and Persha (2014) dealt with the crisis and post-crisis periods in their research. They also examined the relationship between the capital market's risk premium and WGI. In particular, they have shown that WGI can explain the movements in capital risk premiums in the stocks of industries based on consumer goods. In particular, they have demonstrated that WGI can explain the fluctuations of capital risk premiums in consumer-goods-based firms' stock prices (Kwok & Tardesse, 2006; Kaufmann et al., 2010; Donadelli & Persha, 2014; Soumaré & Tchana, 2015). When we control for WGI, we can be more confident about the relationships between cultural practices and the financial system. The data is derived from the governments.org website. The data is the average for 2002-2017 to eliminate the effect of yearly fluctuations.

## 4. Findings

### Analysis-1

Two multiple regression analyses are applied to test our hypotheses about market capitalisation and bank deposits. The model  $R^2$  for the market capitalisation is ,408 showing that our model has important explanatory power.

**Table: 2**  
**Regression Model Results**

Independent Variables	Dependent Variables	
	Market Capitalization (MC)	Bank Deposits (BD)
<i>POpr</i>	,926**	,436
<i>ICpr</i>	-,456*	-,070
<i>UApr</i>	-,529*	-,389
<i>FOpr</i>	,149	0,21
<i>WGI</i>	-,221	-,576**
<i>Model R Square</i>	0,408	0,493
<i>Model F</i>	3,578**	5,062**

Notes: \*\*\*, p<0.001 ; \*\*,p<0.01 ; \* p<0.5

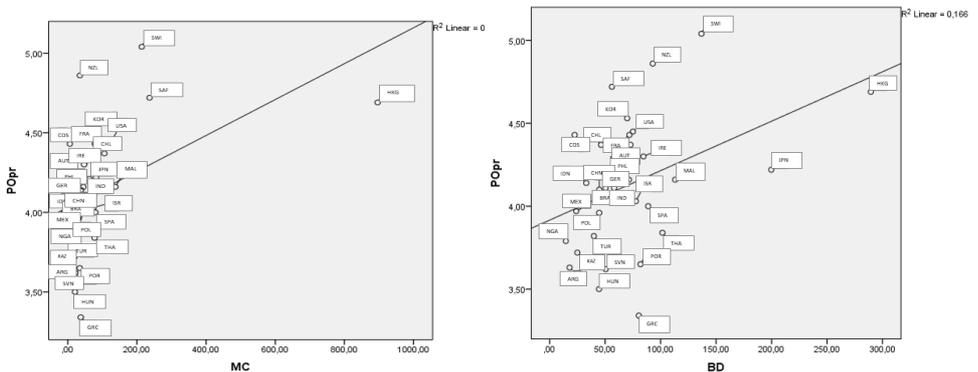
As it can be seen from Table 2, while controlling for the World Governance Index, the effect of the performance-orientation cultural practice on the market cap is significant (p .01). This shows that hypothesis 1 is supported. Second, Table 2 shows that the impact of institutional collectivist cultural practice on market capitalisation is significant (p.05). This indicates that the data also support the third hypothesis. Regarding our fifth hypothesis, the effect of the uncertainty avoidance cultural practice on market capitalisation is also supported (p≤ ,05). Our final cultural hypothesis regarding market capitalisation was about future orientation. However, this hypothesis is not supported.

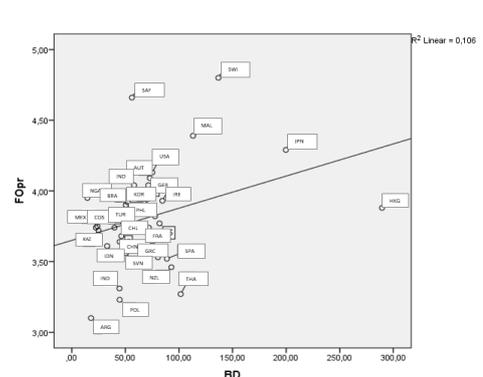
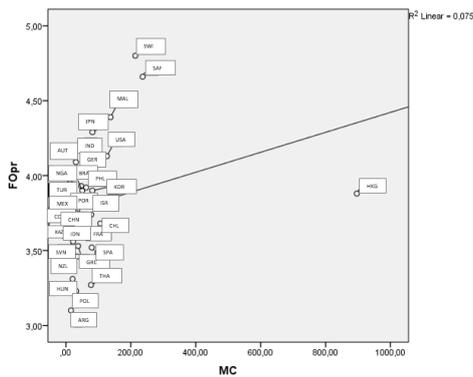
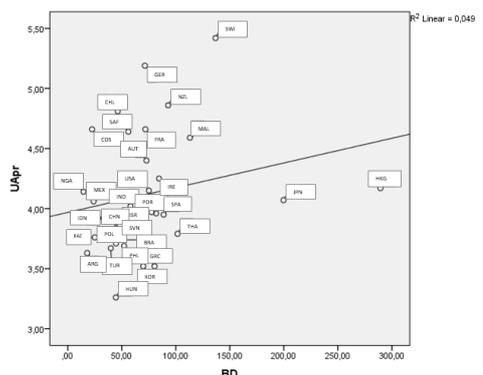
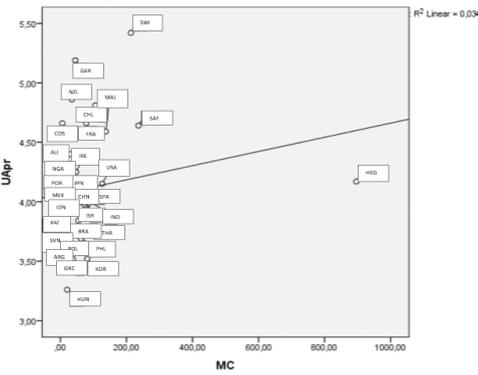
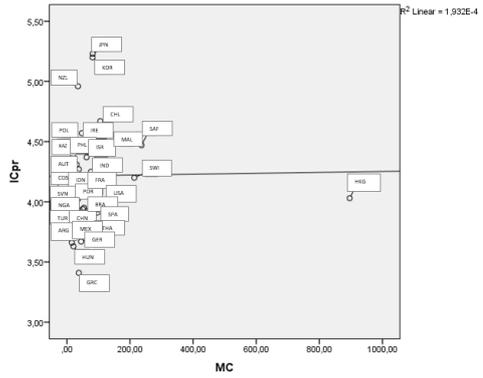
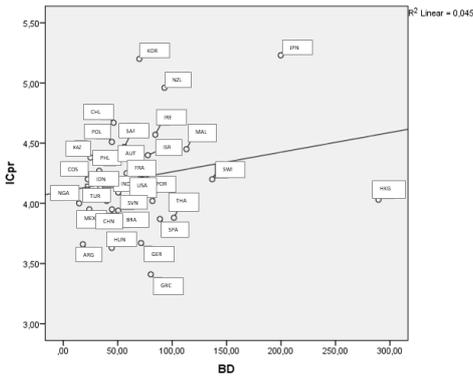
The second regression analysis is applied to test our hypotheses regarding the relationship between cultural practices and bank deposits at the national level. However, as seen in Table 2, none of the hypotheses was supported.

**Analysis-2**

We applied several scatter plot analyses with our variables in the model to show how the countries are grouped according to the variables.

**Figure: 1**  
**The Cultural Descriptive Practices and Financial Variables Position of the 32 Countries**





In line with our hypothesis and regression results, countries such as the USA, Switzerland, and Chile are both high on performance orientation and market capitalisation. Argentina, Kazakhstan, and Slovenia are low on performance orientation and market capitalisation.

In terms of the relationship between performance orientation and bank deposits, the plot seems to challenge our hypothesis. The countries grouped as high-performance orientation countries (South Africa, USA, and New Zealand) also seem to be countries that have high bank deposit rates.

Similar to our hypothesis and significant regression results, countries such as New Zealand, Poland, and Kazakhstan have high institutional collectivism and low market capitalisation levels. And countries such as Spain, the USA, and Thailand have lower levels of institutional collectivism and higher levels of market capitalisation.

Even though our regression coefficient is insignificant regarding our hypotheses about institutional collectivism and bank deposit, countries such as New Zealand, Korea, Japan, and Ireland have high levels of institutional collectivism and bank deposit.

In our dataset, the least uncertainty-avoidant countries appear to be Thailand, the Philippines, and South Korea. The graph shows that these countries also have higher market capitalisation levels. The USA and Spain appear to be the countries with a mid-level of uncertainty avoidance and a mid-level of market capitalisation. Costa Rica, Austria, and Nigeria appear to be the countries that have higher uncertainty avoidance and lower levels of market capitalisation.

Even though the regression coefficient between uncertainty avoidance and bank deposits is not statistically significant, there are signs of groupings of countries that are compatible with our hypotheses based on the graph. Germany, New Zealand, Malaysia, and Switzerland rank well in uncertainty avoidance and bank savings. In addition, consistent with our hypotheses, countries such as Argentina and Kazakhstan have low levels of bank deposits and a release of uncertainty.

While our hypotheses regarding future orientation indicate large market capitalisation and high bank deposits, the regression analysis does not support them. The scatter plot shows that Switzerland, Malaysia, and South Africa have the highest scores for future orientation, market capitalisation, and bank deposits, respectively.

## **5. Conclusions and Discussions**

In this research, we build an argument about the relationship between culture and national financial systems. While the effect of the legal system on national financial systems is well documented by the existing research (Boot & Thakor, 1997; La Porta et al., 1998; Rajan & Zingales, 1998; Demirgüç-Kunt & Levin, 1999), there are only two research papers that try to explain the culture and financial system linkage (see De Jong & Semenov, 2002; Kwok & Tadesse, 2006). However, as discussed in this research, culture is an important phenomenon that might influence people's investment behaviours through risk-taking attitudes and achievement motivation.

Regarding our argument, we hypothesised in our study that descriptive, cultural norms, which describe human behaviour more effectively than values (Fischer, 2006; Shteynberg et al., 2009), will have a significant role in determining national financial systems. We propose that performance orientation positively relates to a market-based financial system, whereas institutional collectivism and uncertainty avoidance will be negatively correlated. We explored how performance orientation will be negatively associated with a bank-based national financial system, whereas institutional collectivism and uncertainty avoidance will be positively related.

We tested seven theoretically developed hypotheses; a significant portion of the findings indicate strong pieces of evidence about the validity of descriptive, cultural norms regarding the market-based financial systems hypothesis. Based on the data, performance orientation positively, but institutional collectivism and uncertainty avoidance negatively relate to market-based financial systems. Even though our hypotheses about uncertainty avoidance, institutional collectivism, and bank deposit relationships are significant, our hypotheses about the relationship between future orientation, bank deposit, and market capitalisation are not; the Scatter Plot shows us some signs that support our hypotheses. We can conclude that achievement motivation and risk-taking attitudes of performance orientation norms, low achievement motivation and risk aversion attitudes of institutional collectivists, and uncertainty avoidance practices make a difference in investment decisions.

One of the practical implications of this study for policymakers is establishing a more transparent stock market system to regulate the market to reduce uncertainty and volatility and expand the coverage of individual investors in the stock market. In addition, boosting financial literacy in countries would reduce uncertainty and increase the number of stock market investors. Consequently, the country's financial system would be more conducive to economic development (Choe & Moosa, 1999). As discussed in the legal and political approaches, countries must enhance the investment climate and ensure that the regulations protect investors. In terms of the contribution of the real and financial sectors, this is the most crucial phase for economies. Results indicate that performance-oriented societies focused on maximising the benefits of individuals have developed capital markets. Societies, which are more collectivistic and uncertainty-avoidant, can establish more detailed legal systems to prevent unethical behaviour in the stock market. This reduces uncertainty and volatility and, as a result, increases market capitalisation levels.

In this research, we examined the effect of cultural practices on the financial systems at the national level using national-level data. Further research can investigate this relationship with an individual-level analysis. Culture can also be observed and measured at the individual level in the form of individual differences (Triandis, 1989). Therefore, cultural values measured at the personal level can be an important determinant of how individuals invest their savings. Research can also use scenarios that represent actual situations and measure how individuals with different cultural values act. Another further research recommendation derived from the study is to conduct a neuroscience-based financial investment study and to see how the brains of individuals respond to the same investment

risk situations from different nationalities. Future research can also cover legal, political, and cultural approaches in the same study as a determinant of this bank and market-based financial system, analyse their comparative effects on the financial systems and develop more rigorous policy implications for developing financial markets.

In terms of limitations of this study, the data we used covers 32 countries, but it is secondary data, and this study might be replicated with more recent data in the future.

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