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CULTURAL DETERMINANTS OF CORRUPTION AND BRIBERY: A CROSS-COUNTRY COMPARISON

Abstract:

Corruption and bribery are observed to be a common behavior not only in developing or transition economies also for all countries. Bribery is emerging as related to the societies' economic, political or cultural structures. Therefore, the factors that determine the behavior of bribery are also emerging as a versatile and multi-dimensional. However, even if bribery and corruption cases arise from various factors, the economic consequences of both actions impose significant costs and undermine the society's cultural structure.

In this paper, generally the corruption and especially the bribery process are analyzed by the factors determining this process. The study examines the linkages between the bribery behavior and the society's cultural institutions and structures. Thus, it aims at revealing the cultural determinants of corruption and bribery behavior. For this purpose, the study firstly makes cross-country comparisons through the corruption perception index the data from Transparency International Corruption Perceptions Index (CPI) and World Bank Worldwide Governance Indicators. Then, it is considered correlations and associations between the corruptions scores of the countries the countries' cultural values and structures through data which is obtained from the World Value Survey (WVS) and the European Value Survey (EVS). WVS and EVS have large sets of variables to develop indexes for cultural classifications at its various dimensions. Thus, it can be analyzed the corruption scores of countries together predictors on cultural characteristics which is obtained from WVS/EVS at aggregated level, and on other macro level economic factors through cross-section regressions.

The study also seeks to determine the predictors of bribery behavior at micro level using Turkey data of WVS. The WVS contains a question on how much the individuals tolerate the bribery. In this section, the study uses the bribery acceptance of individuals as a dependent variable, and estimates the effect of determinants as individual values, attitudes and demographic variables.

Keywords:

Bribery, Corruption, Cultural determinants, World Value Survey, Corruption Perceptions Index, Developing Countries.

JEL Classification: D73, A13, Z10

Introduction

Especially in recent years, it is widely accepted that developing countries have experienced more frequent corruption cases which constitute a significant economic cost not only economic development but also on the macro-economic stability. Beyond its economic costs, corruption also exacerbates social problems such as income inequality in society, unjustness, distrust in social and political institutions and eroding ethical values. Thus, the phenomenon corruption is a condition that must be carefully monitored for maintaining social and political cohesion.

Indeed, corruption has existed throughout human history. Also, it can be encountered in any kind of human interaction such as family, business or community interactions as well as political relationships. Besides, it can be operated in various forms such as bribe, kickback, stealing, nepotism, misappropriation, etc. (Choi & Woo, 2001; 185). Corruption has also emerged within the context of international policy debates as a serious social problem requiring integrated anti-corruption efforts on a global scale. With this international attention, what has historically been defined as a domestic issue, and a subsequently, a cost of a doing business with a select group of developing nations, has re-emerged as a global political concern (Williams & Beare, 1999; 115).

Generally corruption is expressed by each of the different actions such as rent-seeking, nepotism, and logrolling. However, the phenomenon of corruption is widely used in conjunction with the concept of bribery. We are also used and examined the term corruption in the term of bribery in this study. On the other hand, corruption and bribery cases could be experienced in the public sector as well as I the private sector. Therefore it must be evaluated in terms of public economics as well as transactions among individuals. Because personal behavior to be effective at the same time these issues are considered in the scope of the different sciences such as sociology and psychology.

Taking into account the determinants of corruption and bribery, one should examine individual behavior in the extent of a various discipline such as sociology and psychology as well as economics, since behaviors and preferences arises from wide social interactions. Family, community, interest and pressure groups, religious institutions, education, political process is considered as important determinants of the corruption and bribery. Factors which affect large part of corruption and bribery cases can be collected into four main titles as economic, legal, systemic, and cultural factors, although each of these factors is related to the other. In the context of this study, we are mainly interested in cultural factors. Corruption is conventionally seen as a collective condition of a loss of ability, since leaders or citizens undermine not only laws but also the loyalties and values linking leaders and followers, all of society has become corrupted (Johnston, 2012; 332). Thus, as pointed out by Johnston (2012:333), corruption is a systemic issue which affects whole community and which reflects whole society's view.

Main problems to consider the impact of the culture on corruption are identification of cultural factors, and more importantly, measuring the impact of cultural factors. Nevertheless, the literature suggests some approaches, scales on cultural classifications. Some studies develop cultural scales through international social surveys such as World Values Survey (WVS) and European Values Survey (EWS) in which their data is employed in our study. On the other hand, a notable database for cross-country corruption data is Transparency International (TI) that publishes country scores and country ranks worldwide in the name of Corruption Perception Index (CPI).

In this study, we employ the data of TI for corruption scores of countries and the data of WVS to obtain values on cultural variables.

The aim of the study is to consider cultural factors such as family patterns, social groups, religious institutions, and the political structure which have impact on corruption. Determining cultural factors which have effect on corruption and bribery could be contribute to develop social policy to prevent factors stimulate corrupt behaviors in the society.

1. Literature on Corruption and Bribery

Since Rose-Ackerman's paper which is one of the early studies on corruption and bribery in the social context, recent efforts by political scientists and economists have been undertaken to examine cross-national variations in corruption using perception-based measures. Many studies have focused on the effects of economic development, regime type and market structure. Studies have mostly been cross-national with some exceptions like Mauro, Svensson, and Treisman. While cross-national studies provide useful insights on corruption at the aggregate level, some studies have limited knowledge about why corruption occurs more often in some regions or some firms than others within a country which has relatively similar the political institutions, culture and historical factors (Wang, 2013; 219). On the other hand, while the definitions of corruption are evolving over time, the debate over definition could be expected to intensify by the time (Roman & Miller, 2014; 776).

Research on the determinants of corruption has focused on economic development, regime type, and market structure. La Porta et al., Ades and Di Tella, and Treisman found a positive correlation between per capita GDP and perceived corruption. Some studies have examined how corruption occurs with different probabilities in democracies and authoritarian regimes. Treisman suggested that it may take decades for the establishment of democratic institutions to translate into lower perceived corruption. As suggested by some studies, the relationship between corruption and political structure could be nonlinear. Democratization may increase corruption in the short run, but democracy is expected to be having positive effect to control of corruption in long run when it deepens. However, Treisman showed that small increases in freedom do not have a steady impact on corruption in imperfect democracies or authoritarian states. In addition, many studies have found that a less competitive market structure that generates more rents tends to increase opportunities for corruption. Sandholtz and Gray found a negative effect of trade openness on corruption (Wang, 2013; 220).

It is widely accepted that government participation or intervention in the economy is a main cause of corruption. This thesis of "big, bad government" is supported by various theoretical and empirical analyses. Theoretical origins mostly depend on public choice approach which has applied neoclassical market principles to examine government and the behaviors of political actors. According to this approach, a large government leads to a concentration of bureaucratic power and elimination of market competition, and thus, this framework provides opportunity to public officials to extract political rents based on their monopoly power (e.g., Klitgaard, Rose-Ackermann). Joseph LaPalombara empirically point outs the high correlation between corruption and size of the government budget relative to GDP. Treisman finds that state intervention is directly associated with corruption, while Goldsmith finds on inverse correlation between economic liberalization and corruption (Themudo, 2014; 311). On the other hand Themedu (2014) argues that strong governments may be better equipped to fight corruption, although the logic of the "big, bad government" thesis is undeniable. Also

most studies which test this approach's arguments do not control for the potential endogeneity between corruption and its causes. (Themudo, 2014; 311-312).

As perhaps the most common form of corruption, bribery in economic activities has been widely studied in the disciplines of economics, public policy, and decision-making. Some studies have framed bribery as a social dilemma (e.g. Dawes, Heinrich, Ostrom, Shao, Lambsdorff, Abbink & Henning-Schmidt, McCloskey). A social dilemma may be characterized as the conflict between self-interest and public or collective benefits with the N persons (≥2) involved in the decision. Social dilemmas have been widely studied in experimental context such as prisoner's dilemma, the ultimate game, common resources dilemma and public good dilemma, where the social represent the contradiction between defecting to vs. cooperating with the partner and selfish-gain vs. collective benefits (Li & Yao & Ahlstrom, 2014; 4). In the context of social dilemma and collective action, a proposed model of bribery decision may be presented as Figure 1 following. In this model, institutional uncertainty constitutes the contextual background of the bribery decision (Li & Yao & Ahlstrom, 2014; 5).

People are faced with a dilemma: while both fairness and loyalty are fundamental moral values, they are also at odds. Fairness demands that people across all groups be treated equally, whereas loyalty demands that one's own group is given special treatment. In this context, whistleblowing may play an important role. Whistleblowing can be defined as reporting unethical behavior within one's own group to a third party, often and outside authority (Dungan & Waytz & Young, 2014; 105).

The influences of institutional uncertainty on the bribery decision are mediated by entrepreneurs' social value, self-interest orientation, and the ethical emotions or feeling activated by the anticipated bribery behavior. Second, the intensity of elicited ethical emotions upon bribery, such as fear and shame, varies according to individual entrepreneurs' social value and self-interest orientation. Third, social outcomes of bribery can either prevent or provoke a sustained bribery decision, depending on whether bribery behavior leads to positive consequences such as privilege of access to scarce common resources or negative consequences such as sanctions. Fourth, combining both the second and third processes, the model indicates that the bribery decision could influenced by either direct social consequences as means of outside enforcement or indirect internal psychological processes (Li & Yao & Ahlstrom, 2014; 5).

Figure 1. Governing Social Dilemma of Bribery
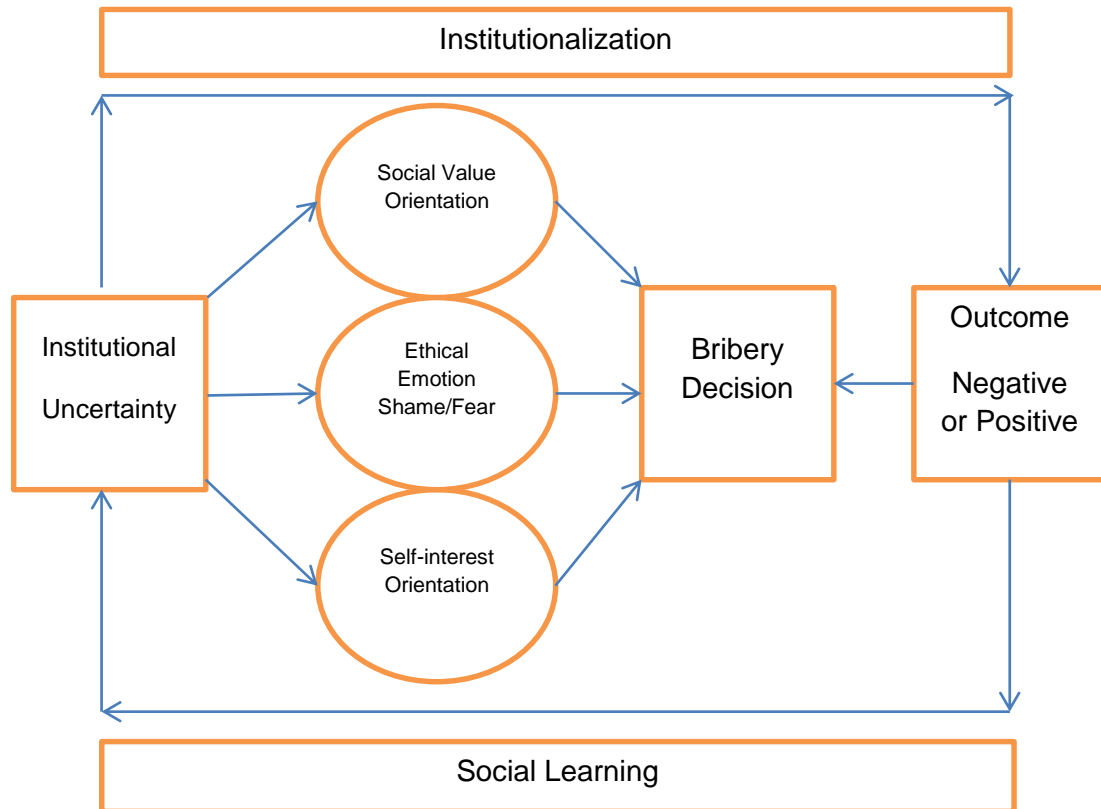
Finally, according to Tricot (2014; 275), "*it is, moreover, a witness to the ever-enhanced interdependence -be it of an economic, social, or legal nature -among the problem of corruption and among the solutions proposed to address them, whether these be local, national, regional, or universal. As a consequence, it is also a witness to the need for the deployment or further legal imagination to help think of this interdependence as a form of global intersolidarity*" (Tricot, 2014; 275).

2. Determinants of Corruption and Bribery

Even if corruption is generally defined as bad morally and accusatory in dictionaries, one definition that is more operational for the purposes of economic analysis is from Nye as "*Corruption is behavior which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains; or violates rules against the exercise of certain types of private regarding influence. This includes such behavior as bribery (use of a reward to pervert the judgment of a person in a position of trust); nepotism (bestowal of patronage by reason of ascriptive relationship rather than merit); and misappropriation (illegal appropriation of public resources for private-regarding uses)*" (Pellegrini, 2011; 14-16).

Factors determining the corruption and bribery process are described in four main topics, including economic, cultural, legal and systemic as presented in Figure 2. Economic factors may list as high tax rates, consumer behavior, firm behavior to reduce costs and regulations. Cultural factors are generally defined as the point of tolerance against corruption in society, competitiveness, material wealth, equity, fairness, paternalism or attitude towards change and view of the state. Regulatory and legal framework and the countries' democratic and political systems are also important other factors that determine the process of corruption and bribery.

Figure 2. Determinants of Corruption and Bribery
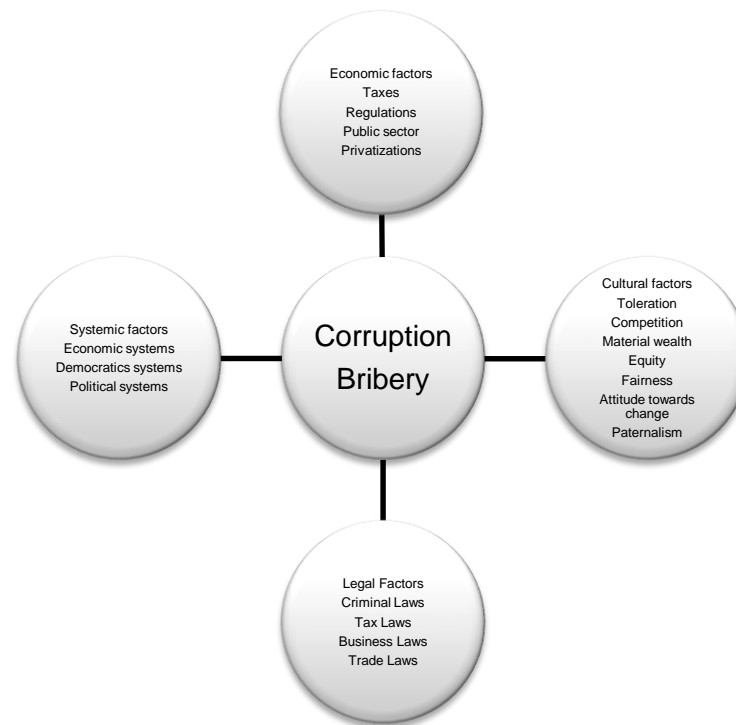
While some scholars consider corruption as unavoidable cost of development, some others argue that corruption has destructive impact on development in terms of corporate bribery especially, since such activities harm to investment climate and social fairness. These harms of corruption have been led to develop tools for law enforcement and other controls (Lord, 2014; 101).

2.1. Economic Factors

A group of determinants confirmed by most studies is government intervention in the market. In this context, tax burden and heavy regulations are considered to be responsible for incentives for bribery. In this case, market actors would be ready to pay illicit payment to decrease costs of doing business. On the other hand, if public officials' wages are respectively low and they have power to control the transfer financial benefits to firms through regulations, public procurement and privatizations, they can be expected to have more incentives to take bribery(Sanyal, 2005; 141).

Nations' welfare level is also likely to play a role in corruption and bribery. Benefits from corrupted actions in poor countries will be high relative to income level. There is enormous empirical evidence on association of low income countries with corruption (O'Connor & Fischer, 2012; 646). It is generally accepted that a high level of poverty provides a ground for anti-social and unethical behavior such as bribe taking. As pointed out by Nwabuzor (2005: 124) the world's most corrupt nations are also among the poorest.

2.2. Legal Factors

Among approaches to corruption and bribery, legalistic approach has been the earliest. Corruption has been defined as violating legal codes on public services to gain personal advantages (Pellegrini, 2011; 15). However, legalistic definition of corruption is problematic if taking into account differences legal codes across nations. For instance, lobbying and private spending on lobbying activities may be a legal and legitimate

practice in a country (e.g. United States), these types of activities can be considered as corruption in some other countries (e.g. most of European countries). (Pellegrini, 2011; 16). Nevertheless, U.S. has been among the first country to make bribery to foreign officials for business purposes illegal in 1997. Thenceforward, other countries have enacted codes and regulations against to bribery. The most notable of them is Convention on Combating Bribery of Foreign Public Officials in International Business in which its main aim is to prevent bribery and to make it a criminal offence throughout world countries. The convention has been signed by OECD members and other five countries. It can be assumed that these types of formal regulations which provide a viable legal framework are basic requirements to combat corruption which is engaged by especially international business, although the enacting law is not sufficient alone (Sanyal, 2005; 142). Therefore, legal framework and tools to combat corruption and bribery are among determinants of involving in bribery.

2.3. Systemic Factors

Corruption is commonly a political fact in which it appears at political interactions, especially at relationships the government and private persons. Thus, political institutions which determine the form of relationships among government bureaucracy and between the government and the public may influence opportunities for corruption. In this context, some scholars argue that larger governments which spend large amount of public money, provide wide range of employment opportunities, and have law enforcement agents make less available corrupt activities due to lower gains and higher risk. Democratic governments which can hold politicians and bureaucrats accountable for their use of public money are accepted to decrease corruption opportunities. (O'Connor & Fischer, 2012; 646).

Corruption is a prevalent fact rather societies which is newborn, underdevelopment and have weak political institutions. The lack of effective political institutions which provide control apparatuses over bribery activities creates inefficient allocation of the society's resources (Choi & Woo, 2001; 185).

In the case of transition economies especially, corruption becomes a mass social phenomenon in a nature of socially institutionalized. It acquires a habitual character within interconnection of social, political and economic institutions. Cheloukhine and Haberfeld (2011; 82) itemize some specific causes of corruption in the case of Russia in 1990s;

- Political instability
- Disintegration of the official system of control
- Difficulties with a totalitarian regime
- Abrupt chancing in socio-economic system without legal culture and foundation
- The lack of experience of private property during the Soviet period.

Transition economies have been important examples of widespread corruption and bribery from 1990s. Ivlevs & Hinks find that important differences in the crisis-bribery relationship in different country groups. It is in the poorer parts of the past-socialist world (Central Asia, Slav, ex-USSR and the Balkans) that the crisis victims are more likely to bribe public officials, while there is no effect in wealthier parts of the region -Central Europa and the Baltics- (Ivlevs & Hinks, 2014; 20).

In some countries, corruption can be decentralized and uncoordinated by public agencies (e.g. African countries). On the other hand, corruption and bribery is centralized that means that bribe is paid at a centralized agency at one time in some

countries of Asia (Gyimah-Brempong & de Camacho, 2006; 247). In later case, "once a business person pays the *price*, he/she gets the services he/she request." Thus, bribe is seen as usual operating cost paid for productive public services (Gyimah-Brempong & de Camacho, 2006; 249).
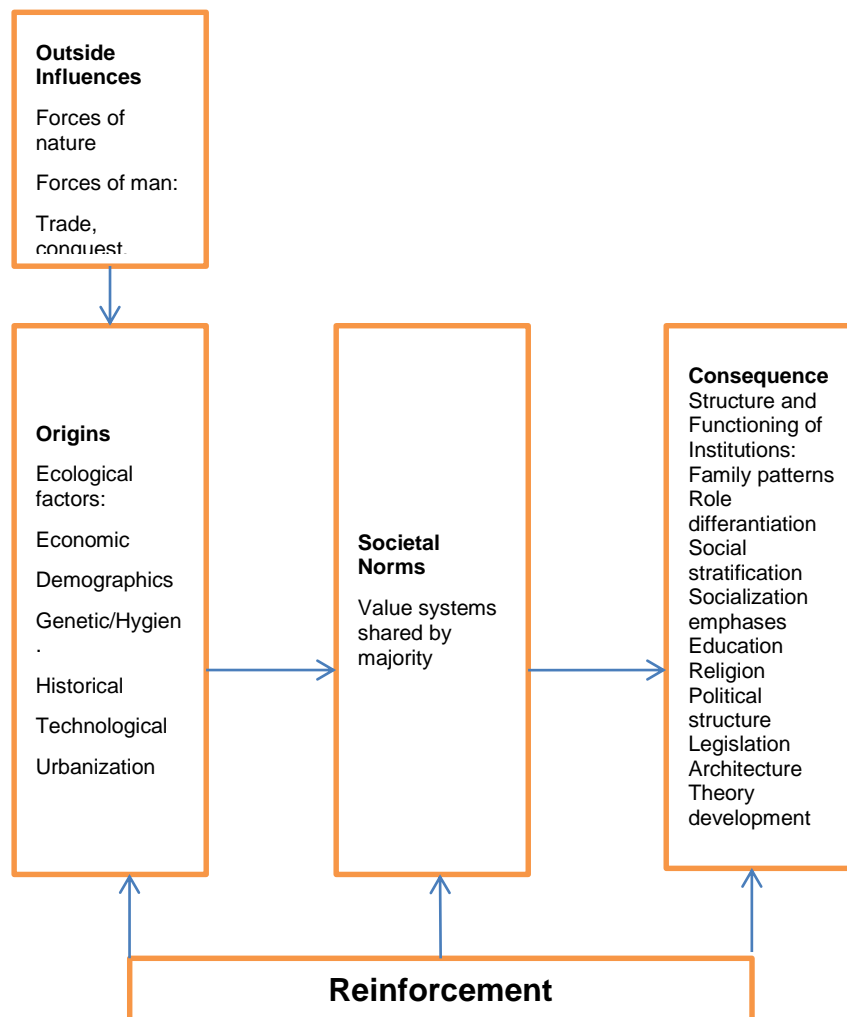
2.4. Cultural Factors

Culture is typically defined as "a shared set of values and beliefs of a group people that can be activated through situational cues". Modern nation states have interacted with another cultural system via colonization, migration etc., while different ideologies and social movements have competed within each nation. Different cultural symbols and norms which regulate behaviors of individuals within the cultural boundaries are prevalent in the public discourse (Fischer at all, 2014; 1595). According to Hofstede (1980; 19) "culture is the collective programming of the human mind that distinguishes the members of one human group from those of another".

Culture may influence the tendency for and toleration of the people for corrupt activities. Culture is different among the societies, and these differences reflect societies' view on wealth, equity, fairness and attitudes toward changing. Sanyal (2005; 141) points out that for instance, corruption may be prevalent in a culture in which people are risk averse, masculine and have a large power distance. Moreover, these types of values are transmitted through the process of learning to other members of culture Sanyal, 2005; 141).

Even if societal values can be conceptualized in several different ways, O'Connor and Fischer (2012; 645) explains Inglehardt and Baker's classification as schematized in Figure 4 following. According to them, societal values are divided into four components as traditional values, rational values, survival values, and self-expression values. It can be expected that self-expression values decrease incentives for corruption to individuals, and rational values may create fewer opportunities for corruption (O'Connor & Fischer, 2012; 646).

Figure 3. The Stabilizing of Culture Patterns by Hofstede

Outside Influences

Forces of nature

Forces of man:

Trade, conquest.

Origins

Ecological factors:

Economic

Demographics

Genetic/Hygien.

Historical

Technological

Urbanization

Societal Norms

Value systems shared by majority

Consequence
Structure and Functioning of Institutions:
Family patterns
Role differantiation
Social stratification
Socialization emphases
Education
Religion
Political structure
Legislation
Architecture
Theory development

Reinforcement

On the other hand, Hofstede identified four cultural dimensions (Hofstede & Bond, 1984; 418). The first dimension was labeled "power distance" which is defined as "the extent to which the less powerful members of institutions and organizations accept that power as distributed unequally". The second dimension was labeled as "uncertainty avoidance" which is defined as "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these". The third dimension was labeled "individualism versus collectivism" which reflects the position of the culture on a bipolar continuum. Individualism is defined as "a situation in which people are supposed to look after themselves and their immediate family only", while collectivism is defined as "a situation in which people belong to in-groups or collectivities which are supposed to look after them in exchange for loyalty." (Hofstede &Bond, 1984; 419).

Figure 4. Classifications of Societal Values
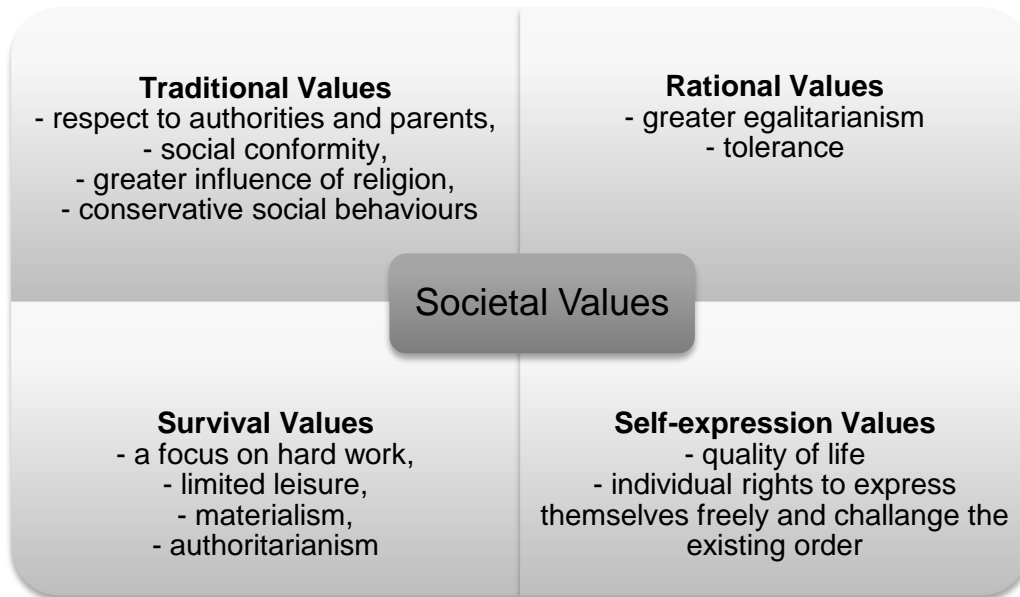
The fourth dimension was labeled "masculinity versus femininity". Masculinity is defined as "a situation in which the dominant values in society are success, money, and thing", while femininity is defined as "a situation in which the dominant values in society are caring for others and the quality for life." (Hofstede & Bond, 1984; 420).

3. Data and Methodology

In this study, we mainly follow cultural classification by Hofstede's four dimensions to consider relationship between culture and corruption

As general, people in high power-distance cultures believe that there are appropriate and certain separations between socio-economic classes. This is expected to leads to increase the likelihood of demanding bribes by public officials and of offering bribes by business. High-level public officials may have confidence in their class's privilege to get personal benefits from the position (Getz & Volkema, 2001; 15).

On the other hand, the uncertainty avoidance in the national culture may lead to corruption in the case of economic adversity. In more masculine culture which is emphasized values such as assertiveness, aggression, and competitiveness, it can be expected the stronger the relationship between economic adversity and corruption (Getz & Volkema, 2001; 16).

Table 1 presents variables selected from WVS to consider correlations between "structure and functioning societal institutions" and corruption. We use 6th wave of the survey WVS (2010-2014) that is currently finished and covers nearly 60 countries.

Table 1. Variables on Culture (WVS 6. Wave; 2010-2014)

Variables	WVS Variables	Questionnaire Code	Question
Family Patterns: Child Qualities	Important Child Qualities: Independence	V12	Here is a list of qualities that children can be encouraged to learn at home. ".independence"
Family Patterns: Child Qualities	Important Child Qualities: Obedience	V21	Here is a list of qualities that children can be encouraged to learn at home. "…obedience"
Family Patterns: Masculinity	If a Woman Earns More Money than her Husband	V47	Do you agree, disagree or neither agree nor disagree with the following statements?: "If a woman earns more money than her husband it's almost certain to cause problems"
Family Patterns: Masculinity	On the Whole, Men Make Better Business Executive Than Woman Do	V53	For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. Do you strongly agree, agree, disagree, or strongly disagree?: "On the whole, men make better business executive than woman do"
Family Patterns: Masculinity	Having a Job is the Best Way for a Woman	V48	Do you agree, disagree or neither agree nor disagree with the following statements?: "Having a job is the best way for a woman to be an independent person"
Family Patterns: Satisfaction	Satisfaction with Financial Situation	V59	How satisfied are you with the financial situation of your household?
Institutions: Education	Confidence: Universities	V119	Could you tell me how much confidence you have in them: is it a great deal of confidence, not very much confidence or none at all? "…universities"
Institutions: Religion	Religious person	V147	Independently of whether you attend religious services or not, would you say you are:
Institutions: Religion	Confidence: The Church or Religion Organizations	V108	Could you tell me how much confidence you have in them: is it a great deal of confidence, not very much confidence or none at all? "…the church"
Institutions: Political Structure	Confidence: The Government	V115	Could you tell me how much confidence you have in them: is it a great deal of confidence, not very much confidence or none at all? "…government"
Institutions: Political Structure	Confidence: Parliament	V117	Could you tell me how much confidence you have in them: is it a great deal of confidence, not very much confidence or none at all? "…parliament"
Corruption and Bribe	Justifiable: Someone accepting a bribe in the course of their duties	V202	Please tell me each of the following actions whether you think it can always be justified, or something in between.

Source: World Values Survey (2010-2014)

WVS is a global social survey that explores people's values and beliefs, their change over time and their impact on social and political development of different countries of the world. It has large sets of variables to develop indexes for cultural classifications at its various dimensions. According to Table 1, we deal with "power distance" and "uncertainty avoidance" and question of "satisfaction with financial situation" in Family Patterns. As measures of "individualism versus collectivism" and "masculinity versus femininity", we use a number of variables on child qualities and family patterns. In selecting variables on cultural determinants of corruption and bribery, we mainly benefit from Figure 3.

Table 2. Corruption Perception Index (2012) (Selected Countries according to WVS 6)					
Country Rank	Country	CPI 2012 Score	Country Rank	Country	CPI 2012 Score
105	Algeria	34	9	Netherlands	84
139	Azerbaijan	27	1	N. Zealand	90
102	Argentina	35	139	Nigeria	27
7	Australia	85	139	Pakistan	27
105	Armenia	34	83	Peru	38
123	Belarus	31	105	Philippines	34
20	Chile	72	41	Poland	58
80	China	39	27	Qatar	68
37	Taiwan	61	66	Romania	44
94	Colombia	36	133	Russia	28
29	Cyprus	66	50	Rwanda	53
118	Ecuador	32	5	Singapore	87
32	Estonia	64	37	Slovenia	61
13	Germany	79	163	Zimbabwe	20
64	Ghana	45	30	Spain	65
169	Iraq	18	4	Sweden	88
133	Kazakhstan	28	88	Thailand	37
58	Jordan	48	80	Trinidad&Tob.	39
45	S. Korea	56	54	Turkey	49
66	Kuwait	44	144	Ukraine	26
154	Kyrgyzstan	24	118	Egypt	32
128	Lebanon	30	19	U.S.	73
160	Libya	21	20	Uruguay	72
54	Malaysia	49	170	Uzbekistan	17
105	Mexico	34	156	Yemen	23
88	Morocco	37			
Source: Transparency International, 2012, Corruption Perception Index					

Data on perceived corruption were obtained from TI's corruption perception index. Taking into account of difficulties to measure of corruption because of necessarily secrecy of corrupt transactions, measurement by TI can be assumed as a good approximation to nation-level corruption.

CPI scores of countries belong to 2012 when is corresponding average year of WVS 6th wave. The Corruption Perception Index scores countries on a scale from 0 (highly corrupt) to 100 (very clean). As can be seen in Table 2, there is no country which has a perfect score, while two-third of countries score below 50 in which it is accepted to indicate a serious corruption problem (TI, 2012; 1).

4. Evaluating Cultural Determinants of Corruption and Bribery

In this section, we evaluate correlations between aggregated values of variables of cultural factors and CPI scores of nations

4.1. Family Patterns and Corruption

We assess family pattern with child qualities and some questions on masculinity and women's role in the family. Independence in child quality can be accepted as important for the development of individualism. On the other hand, obedience to authority is a prominent feature of the collective society. In this context independence (V12) and obedience (V21) variables can use to be proxy the measure of "individualism versus collectivism".

Figure 5. Independence (V12) and CPI Score
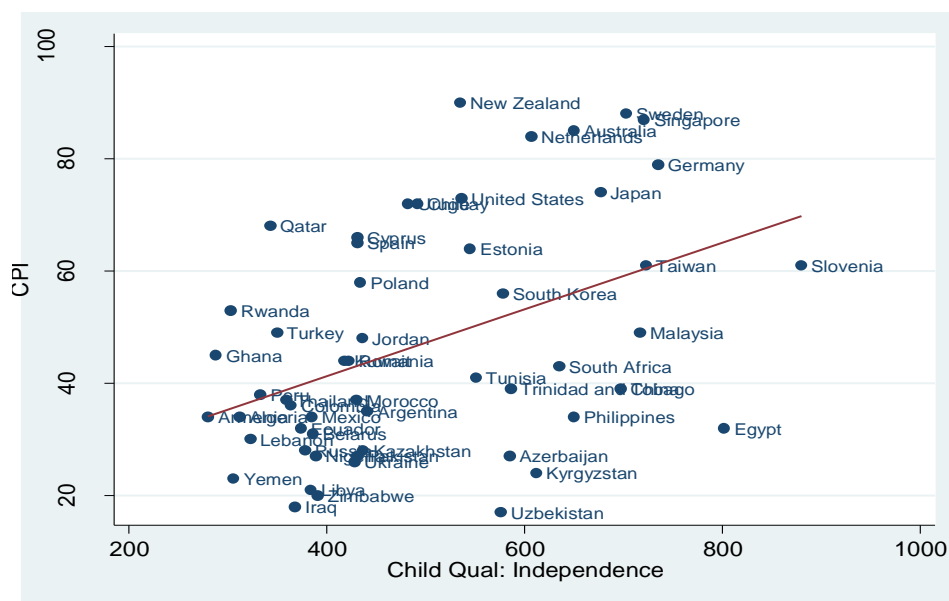
As seen from Figure 5, there is a positive correlation between independency in child qualities and CPI scores of countries. Countries which have families emphasize on individualism in child education tend to be having high CPI scores and so lower level of corruption. R-square coefficient between CPI scores with between the independent child-rearing is 0,19.

Figure 6. Obedience (V21) and CPI Score
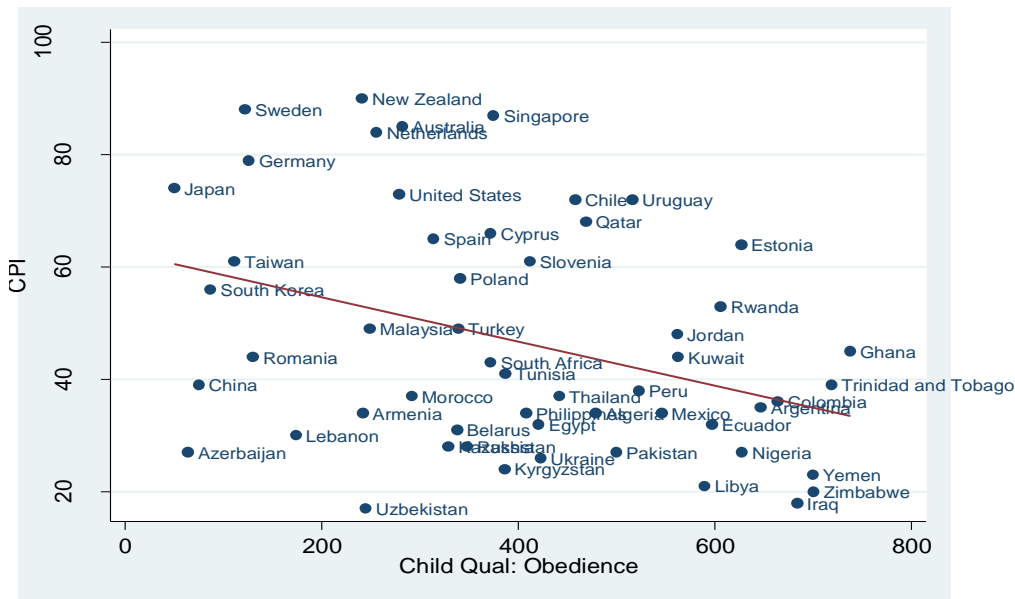
As seen from Figure 6, there is a negative correlation between obedience child qualities and country's CPI score. Higher level of emphasis on obedience to authority is associated with lower CPI score and higher level of corruption. In this case, R-square coefficient is 0,13.

Figure 7, 8 and 9 evaluate correlations between masculinity/femininity culture of the society and corruption level.
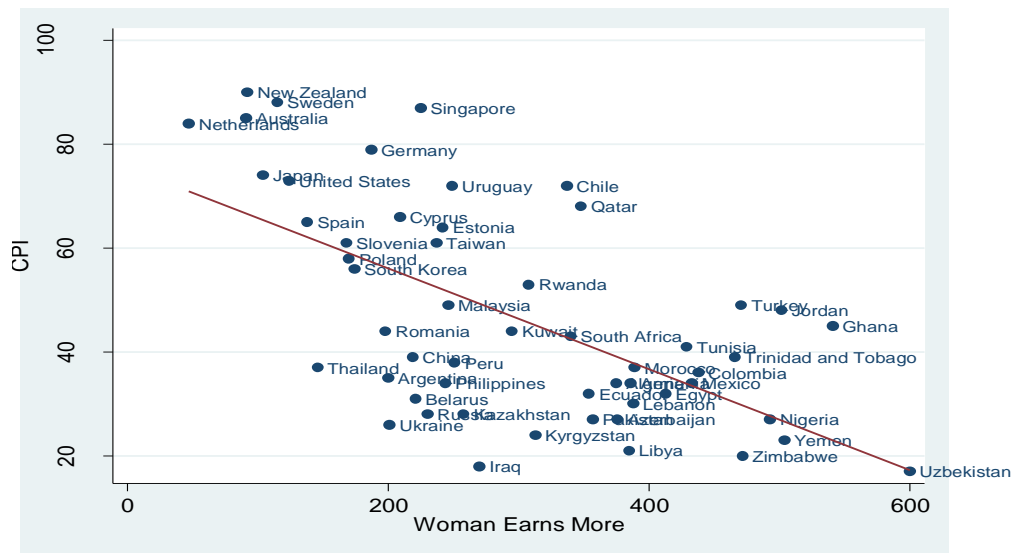
Figure 7. Masculinity (V47) and CPI Score

Figure 7 presents the association between attitude toward women's economic role in family and corruption score. Horizontal axis represents the percentage of persons who answer as "agree" to question ""If a woman earns more money than her husband, it's almost certain to cause problems?". According to this, the lower level of masculinity is negatively correlated with CPI scores, and so, associated with the lower level of corruption with R-square coefficient of 0,38.

As seen from Figure 8, there is a positive correlation between the emphases of the place of women in business life and CPI scores. The question is "on the whole, men make

better business executives than women do?", and we consider percentage of answer "disagree". Thus, again lower level of masculinity is associated with lower level of corruption. R-square coefficient is 0,29.

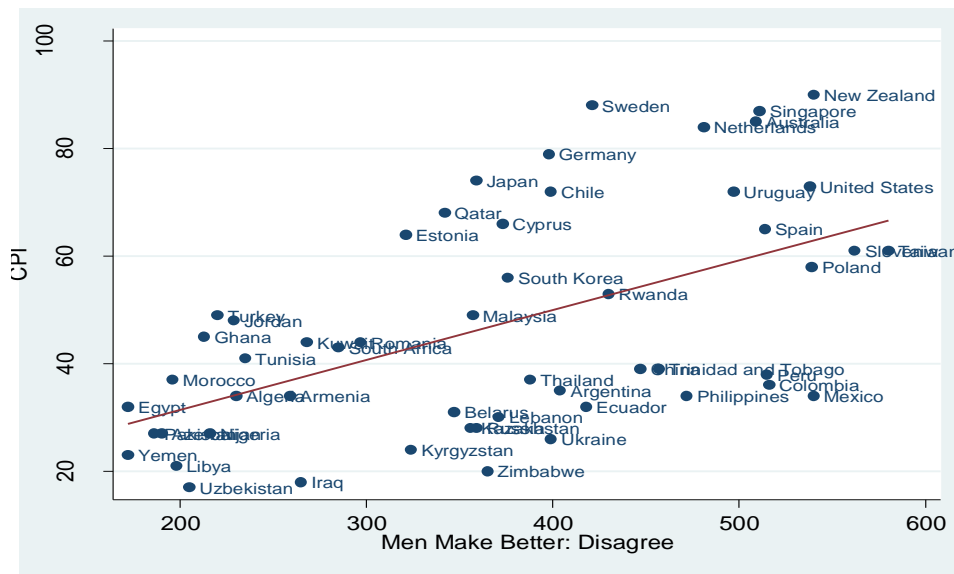**Figure 8. Masculinity (V53) and CPI Score**

Figure 9 shows relationship between women's independency in job market and corruption of nation. Horizontal axis displays the percentage of answers "disagree" of total to question "Having job is the best way for a woman to be an independent person?". Thus, increases negative attitudes toward women in job market for gaining independency is correlated with lower CPI score (and higher level of corruption) despite of low R-square coefficient of 0,06.

Figure 9. Masculinity (V48) and CPI Score
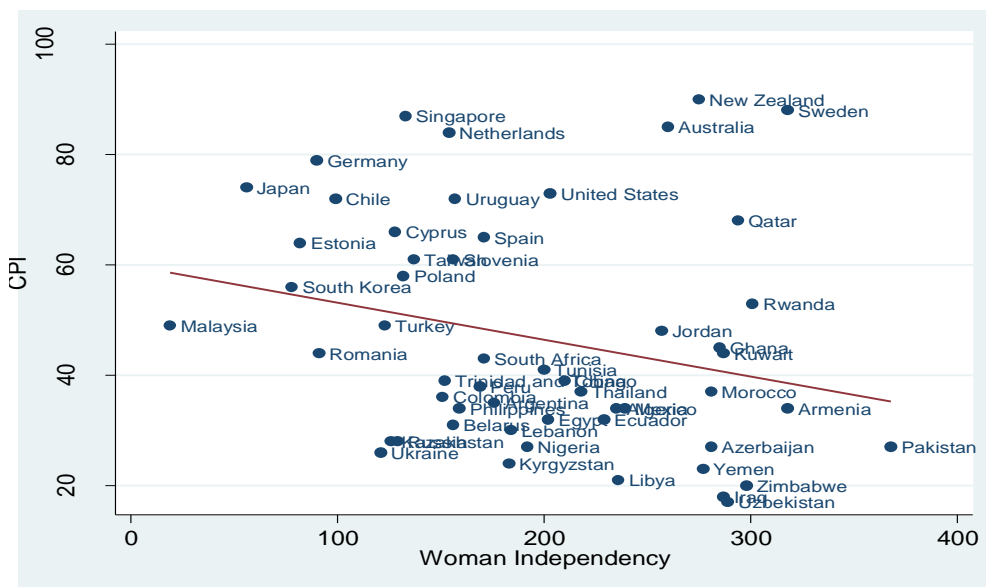
Finally, we consider the relationship between financial satisfaction in household and corruption. Figure 10 shows that there is negative correlation between dissatisfaction with financial situation and CPI scores. Thus, an increase households dissatisfied with their financial situation is associated with higher level of perceived corruption. R-square coefficient is 0,23.

Figure 10. Financial Satisfaction (V59) and CPI Score
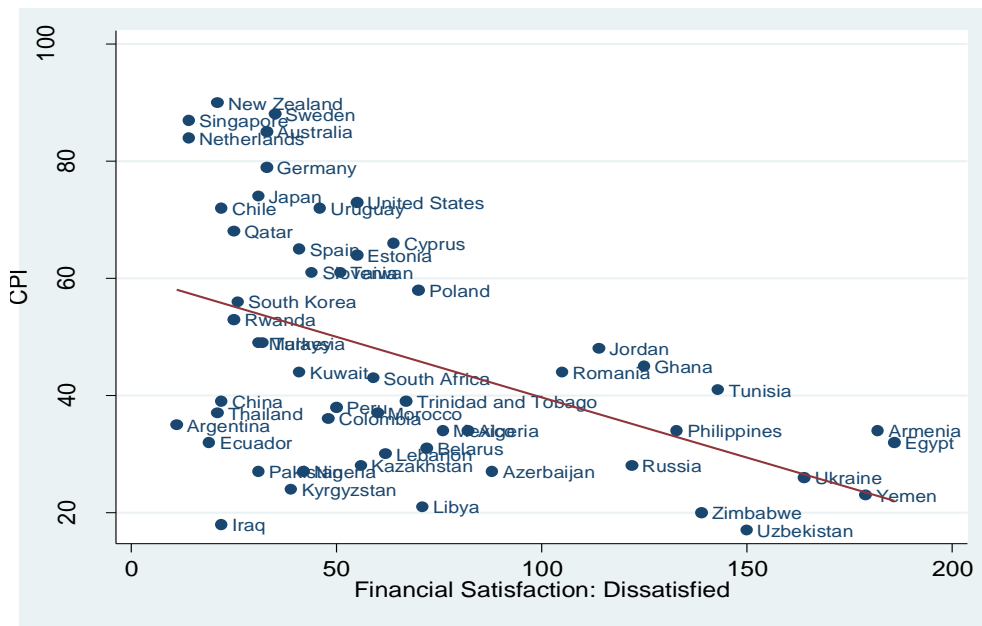
4.2. Trust in Institutions and Corruption: Education, Religion, and Political Structure

In this section, we assess basic institutional features of countries with related to trust in education, religion and political institutions. In this context, we consider trust in universities, churches/religious institutions, government and parliament. Also, general level of religiousness is considered through a question which is aggregated at nation-level.

Figure 11. Trust in Universities (V119) and CPI Score
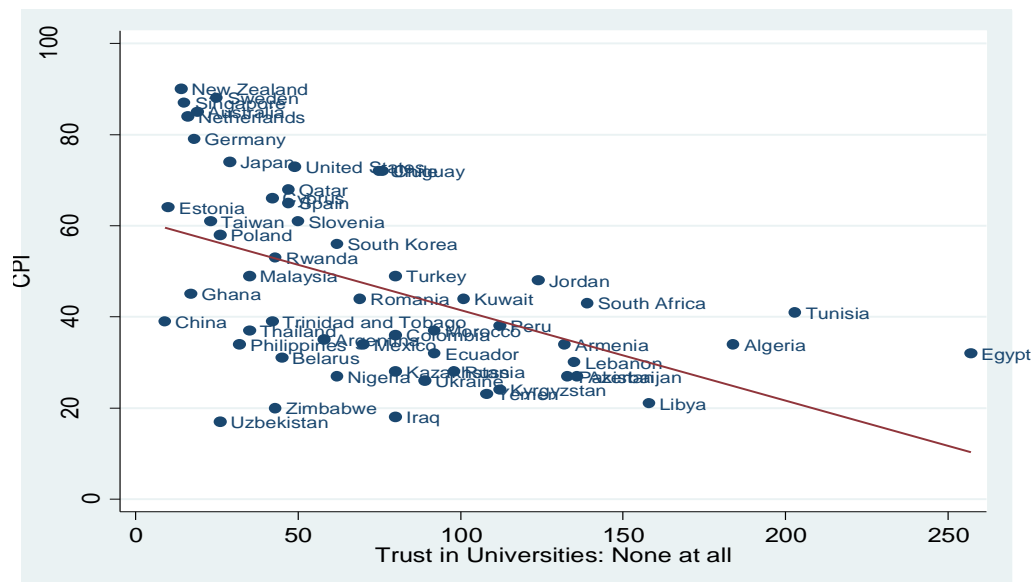
First, as can be seen in Figure 11, distrust in universities is negatively correlated with CPI scores of countries. Thus, increases distrust in educational institutions associated with higher level of corruption with R-square of 0,26. Religiousness level of country is negatively correlated with CPI scores and positively correlated with perceived corruption (R2=0,18)

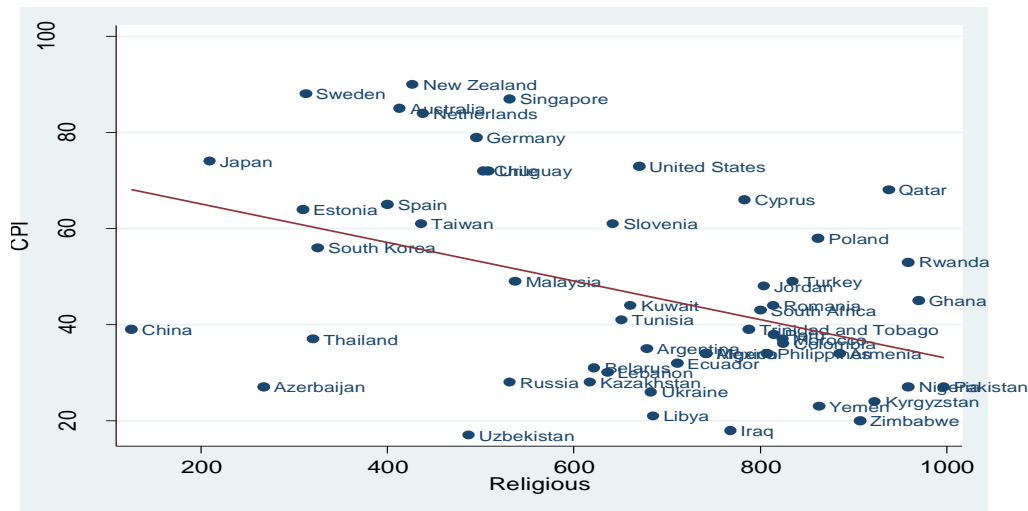**Figure 12. Religious Person (V147) and CPI Score**

Figure 12 consider relationship between religiousness and corruption. The question in which the variable depends on is "independently of whether you attend religious service or not, would you say you are?", and we aggregate answers expressed as "religious person" at country-level. Religiousness level of country is negatively correlated with CPI scores and positively correlated with perceived corruption (R2=0,18)

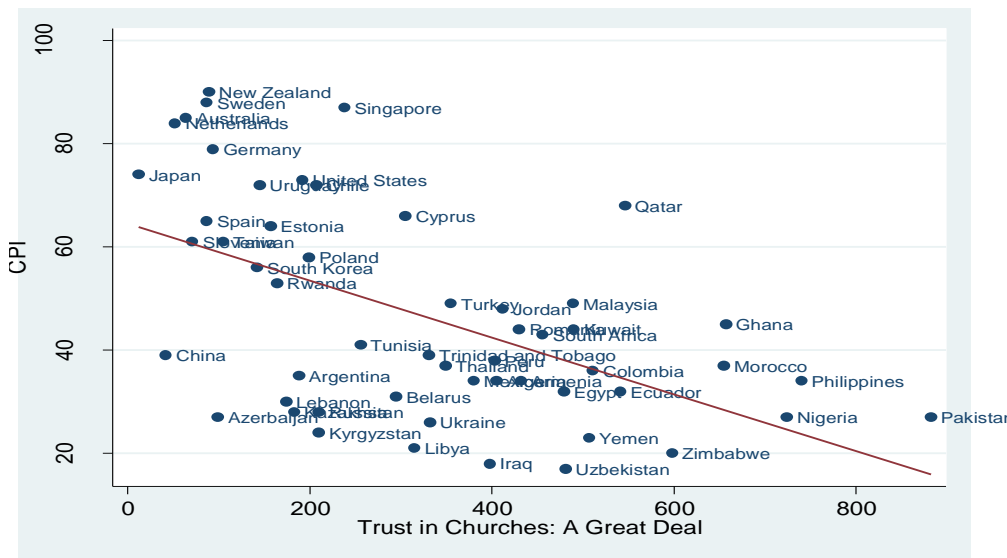**Figure 13. Trust in Churches or Religious Institution (V108) and CPI Score**

Figure 13 displays correlation between trust in churches and CPI scores. Similarly to religiousness, high level of trust in churches is negatively correlated with CPI scores and positively correlated with corruption levels of countries with higher R2 of 0,30.

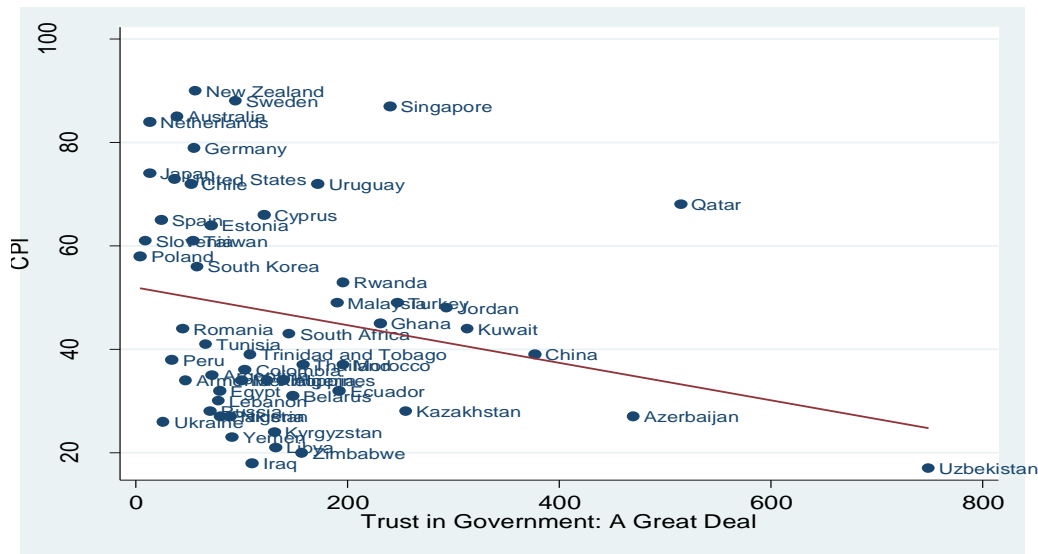**Figure 14. Trust in Government (V115) and CPI Score**

Figure 14 and Figure 15 evaluate associations between trust in political institutions and corruption. As seen from Figure 14, there is a negative correlation between trust in government and country's CPI score. Thus, high level of trust in government tends to be associated high level of corruption (R2=0,06). Again, there is a negative correlation between trust in parliament and country's CPI score (Figure 15). Increases at the level of trust in parliament is positively associated with corruption level, despite of low coefficient (R2=0,02). Generally, although we found positive association between trust in political institutions and corruption scores, the correlation coefficient is quietly low.

Figure 15. Trust in Parliament (V117) and CPI Score
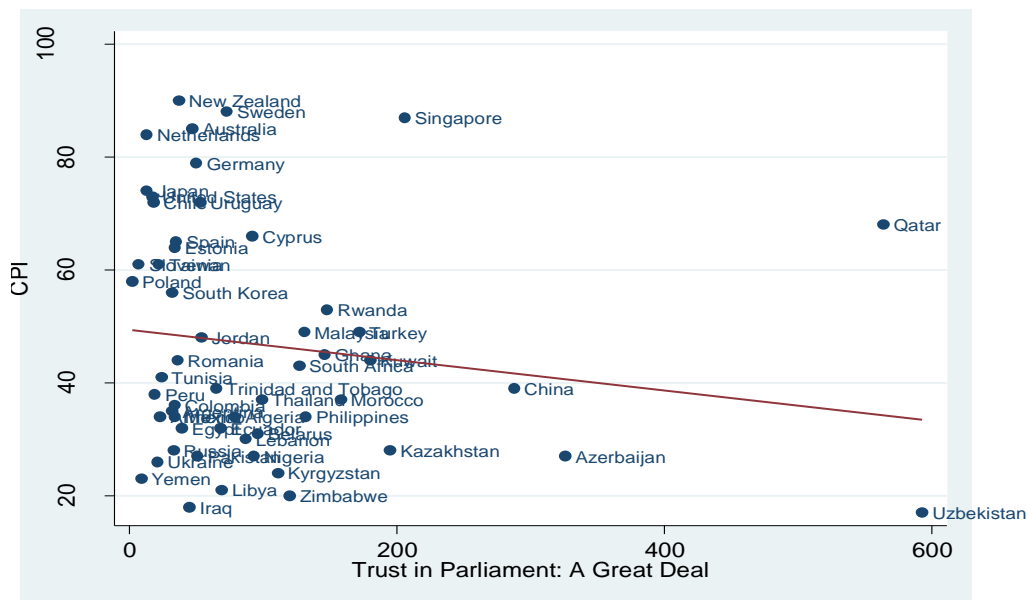
Conclusion

Corruption is a multifaceted concept and it has societal and political fundamentals beyond economic ones. Family, community, interest and pressure groups, religious institutions, education, political process is considered as important determinants of the corruption and bribery. Factors which affect large part of corruption and bribery cases

can be collected into four main titles as economic, legal, systemic, and cultural factors, although each of these factors is related to the other. In the context of this study, we are mainly interested in cultural factors. Countries which have similar economic structure have different levels of corruption because of societal factors which affects individual behavior.

Main problems to consider the impact of the culture on corruption are identification of cultural factors, and more importantly, measuring the impact of cultural factors. Nevertheless, the literature suggests some approaches, scales on cultural classifications. Some studies develop cultural scales through international social surveys such as World Values Survey (WVS) and European Values Survey (EWS) in which their data is employed in our study. On the other hand, a notable database for cross-country corruption data is Transparency International (TI) that publishes country scores and country ranks worldwide in the name of Corruption Perception Index (CPI). In this study, we employ the data of TI for corruption scores of countries and the data of WVS to obtain values on cultural variables.

We evaluate correlations between cultural factors and corruption scores at nation-level. We found that corruption level of countries is negatively correlated with emphasis on independency in child education and positively correlated with obedience to authority. Thus, it can be considered that emphasis on individualism as an educational virtue has positive effect on control of corruption. On the other hand, with a few question, we assess masculinity/femininity dimension of the culture, and find that emphasis on masculinity in the national culture is positively correlated with corruption level. Countries which have more emphasis on women independency in terms of family patters have lower level of corruption. Finally we find religiousness and trust in political institutions to be positively correlated with corruption level.

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