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Corruption and Financial Development

Evidence from Eastern Europe and Central Asia Countries

Summary: Studying the relation between corruption perception and financial markets and examining its consequences for the financial system have attracted many researchers in recent years. To understand the effect of it's to financial markets is important for especially emerging countries. This paper examined the impact of Corruption Perception Index (CPI), government size, openness, and GDP on the financial development using the Generalized Method of Moment (GMM) approach of 19 Eastern Europe and Central Asia countries for the period 2012 to 2017 as yearly dates. Our findings suggest that there is not a relationship between the level of corruption perception and financial development.

During the last three-decade, corruption has become a common target for international organizations, national governments, non-governmental organizations, and other entities that recognized the great perils that it brings to political, economic, and social life. The reason for this interest is that the cost of economic and social corruption affects a lot of sides. The most important these effects have observed on investment and economic growth.

There are different definitions of corruption. As the shortest definition, corruption is defined as the abuse of public power for private gains (Park and Khanoi, 2017). In another definition is that corruption can also

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be defined as dishonest or illegal behavior of government officials (Shumetie and Watabaji, 2019). In the definition of the World Bank, corruption is defined as *"The use of public power for private interests"* (World Bank, 2000). With recent developments, it has become very difficult to explain corruption only by public power. Corruption in a broader definition than limiting it to public power, it is also possible to express as *"abuse of any duty for personal interests"* (Özbaran, 2003). Accountability is one of the best antidotes to corruption because it makes everyone is accountable and responsible for what they do. In addition, the lack of efficiency is a hotbed of corruption too, because the losses caused by corruption will go unnoticed if the outcome of an activity is not important (Pulay and Lucza, 2018).

In addition to bribery and extortion, which defines corruption in a narrow sense, corruption is also manifested in collusion, cronyism, nepotism, fraud, deception, embezzlement, the misuse of government power, and other related activities. In the literature of the corruption-development nexus, corruption is widely believed to be pernicious to entrepreneurs' investment incentives, the composition of government expenditure, the accumulation of human capital, the inflow of foreign direct investment, the effectiveness of international aid, among others, and thus detrimental to economic growth (Chen et al., 2015)

It is an endemic problem that entails a lot of undesirable consequences, especially in emerging countries (Anaere, 2014; Chen et al. 2015). The reason this is a prevailing environment characterized by lapses in the rule of law, the inefficient judicial system, weak prudential regulations, and weak development of institutions crucial for good governance (Anaere, 2014). In addition, these countries usually have undeveloped stock markets and access to finance that is usually assured by the banking system. For example *Chen et al.* (2015) argue that corruption affects more less-developed than higher developed economies. Therefore, understanding how corruption perception affects financial markets may help regulatory agencies to fight and to reduce corruption, and further to improve financial institutions and economic growth. When the impact of financial markets on the country's economy is taken into consideration in these countries, the impact of corruption becomes even more important.

As it is known, the important sides of financial markets banks act as the lifeblood of an economy, providing the majority of financial resources for the economy, especially in middle-income countries. The efficiency of the banking sector is regarded as having a first-order impact on economic growth, especially in less developed economies (Chen et al., 2015).

Analyzing the impact of corruption perception on financial institutions is important because knowing the factors that influence this relationship may help central authorities to find ways of reducing corruption. Because of all these reasons, since the 2000s, many empirical studies examining the determinants and the economic and political consequences of corruption in the public sector. Despite a rich body of research on the corruption-development nexus, there is a limited number of works on the role that corruption perception plays in the field of financial intermediation. Yet the evidence on the impact of corruption on financial markets development remains contradictory and ambiguous.

Although corruption is a variable that cannot be measured directly, in recent years, some organizations have provided corruption indices across a wide range of countries based on surveys to qualitatively assess the level of corruption. Institutions and organizations such as Economic Intelligence Unit, Political Risk Services Inc., Political & Economic Risk Consultancy, World Bank, Price Waterhouse Coopers, World Economic Forum, Freedom House, Transparency International publish research on the perceived level of corruption. One of the most renowned indices is the Corruption Perception Index (CPI) published by Transparency International. The Corruption Perception Index of Transparency International is unarguably the most successful product concerning the measurement of cooruption perception. According to the CPI, the results achieved by any country so far are announced to the public together with the GDP growth rate or the amount of direct investment (Németh et al., 2019).

This argument promotes a knowledge gap and requires further investigation of the

relationship between financial institutions and corruption. Therefore, we examine the impact of corruption perception on bank performance, particularly the case of Eastern Europe and Central Asia.

There are a few reasons to select these countries. First of all, those nations are more likely to suffer from the destructive effect of corruption perception and these countries are countries with a high incidence of banking crises and financial crises in the world. Secondly, there are limited studies on the financial dimensions of corruption perception here. As finally, when we determined to sample, we adhered to Transparency International because we used CPI. And finally, the banking systems of these countries have similar characteristics.

The study contributes to the existing literature by investigating the effect of corruption perception on bank performance from Eastern Europe and Central Asia.

The paper is structured as follows. Section two provides a brief review of the dimension of corruption perception. The other section provides empirical Studies on the impact of corruption on the stock market and banking development. Section four presents descriptive statistics and explain research methodology. Section five reports regression results and section five concludes.

DIMENSIONS OF CORRUPTION PERCEPTION

The effects of corruption perception on the economy generally divided into two views. Sand the wheel hypothesis stated that corruption perception has a negative impact on the economy, whereas grease the wheel hypothesis stated that corruption has positive impact on the economy.

Corruption affects financial institutions in very different ways. A predictable economic environment is of great importance for the private sector. Investors will continue to invest as long as they are convinced that they can get the return on their investments and ventures. Therefore, the consumer and investor confidence in the financial markets must be restored. However, this process is very slow leaving many small economies, industries and even small firms struggling to attain break-even.

On the other hand, strong supervisory and legal institutions can increase bank lending by ensuring the fulfillment of loan contacts, consequently providing the bank's protection against the default of debtors. Whereas, in case of corruption in the legal institution banks are unsure regarding the imposition and fulfillment of legal contracts and recovery of credits on debtors default. (Ahmad, 2013). Corruption adds to uncertainty for banks; it reduces their trust in courts and acts as a tax on loans for borrowers (Weill, 2011).

In order to cover the increasing costs due to corruption, domestic and foreign borrowing is applied, interest rates rise and the country's risk level increases. This process, which negatively affects the capacity of direct and indirect investments, paves the way for the outflow of foreign capital from the country (Erkal et al., 2014).

Corruption may cause misallocation of loans, raising firms' default probabilities by increasing the cost of capital and reducing the effectiveness of the company's use of loans. Banks with low asset quality will operate poorly and are prone to the crisis (Son et al., 2017). The more corrupt a country is, the more risk a banking system is prone to. The existence of corruption will further accelerate the risk tolerance of banks (Chen et al., 2015).

A high level of corruption in an economy increases corruption perception in key institutions of governance and consequently raises uncertainty from banks' perspective on

the ability of the court to enforce the contract. This may lower banks' incentives for lending to firms. On the other hand, increased risk-averse by bank managers engendered by uncertainty in the credit market could reduce lending, thereby prompting borrowers to resort to desperate and often illegal methods to obtain loans from banks (Anaere, 2014). After the financial crisis, lending by banks suffered a severe fall and corruption may have an important role in shaping the lending behavior of banks (Toader et al., 2018).

Another dimension of corruption is related to a geographical position. Empirical evidence shows that corruption in an individual country or region is positively correlated with corruption in neighboring countries or regions (Gründler and Potrafke, 2019).

On one hand, corruption perception may hinder the increase of lending and raise the probability of borrowers' default by increasing the cost of loans, but on the other hand, firms with higher productivity and efficiency can bid higher bribes and are more likely to receive more loans (Chen et al., 2015).

Corruption may increase banks' susceptibility to risks due to the misallocation of funds from good projects to bad ones, whereas it may also help to screen out the firms with the lowest cost and increase the efficiency of capital allocation (Chen et al., 2015).

There are difficulties in measuring against the necessity of measuring. After that, corruption measurement approaches developed as perception-based, experience-based, external (expert) evaluations and administrative (Németh et al., 2019).

LITERATURE

In literature, there is a lot of paper. The majority of these studies look into the implications of the interaction between corruption perception

and financial development for economic growth and development.

Only recently, however, some of the studies have focused on the link between financial institutions and corruption perception. A major impediment with respect to bank capital allocation is the corruption perception issue and its impact on bank risk-taking, stock market performance, bank performance, and bank lending that has raised the interest of academics.

A number of papers have examined the dimensions of corruption perception on stock market development (Ayaydın and Baltacı, 2013; Ming et al., 2018) and on banking sector (Weill, 2011; Ahmad, 2013; Arshad and Rizvi, 2013; Anaere, 2014; Chen et al, 2015; Son et al., 2017; Toader et al., 2018; Nurhidayat and Rokhim, 2018; Ali et al., 2019; Bolarinwa and Soetan, 2019; Ozili, 2019). Some of these are given below:

Ng (2006) aim is to summarize how corruption may affect the bond and stock markets. The results showed that across international financial markets, corruption is found to be associated with higher firm's borrowing cost, lower stock valuation, and worse corporate governance.

Weill (2011) attempts to examine the effects of corruption on bank lending on the country level and bank-level. Results obtained from cross country regression analysis revealed a negative relationship between corruption and bank lending, which further decline bank and economic growth. However, corruption softens the financing channel and increases bank risk behavior. Overall, the study concludes that low corruption policies can reduce bank risk that further increase bank lending and bank stability.

Similar to the above, *Park* (2012) also explicated the influence of corruption on bank stability and economic growth over the period of 2002-2004. The first result is that corrupt

practices decline the asset quality of the banking sector which reduces bank loans. This further increases a high level of loan risks, the vulnerability of banking sector and financial distress in banks. The second result is that corruption in the banking sector increases bad debts that lower down the rate of economic growth. In addition, corrupt practices also influence bank funding negatively that declines the domestic investment and subsequent economic growth.

Arshad and *Rızvi* (2013) investigated the impact of corruption on Islamic bank profitability in highly corrupt countries banks over the 2000–2010 time period. According to panel least squared regression results, corruption has a significant positive impact on bank profitability. The results lend some credence to the implications that banks are thriving from corruption in the country.

Ayaydın and *Baltacı* (2013) examined the role of corruption and banking sector development on stock market development using a panel data of 42 emerging economies for the period 1996 to 2011. Their findings suggested that there exists a negative relationship between the level of corruption and financial system improvement.

Anaere (2014) investigated the impact of corruption on bank lending in Sub Saharan African countries using regional data for corruption and bank-level data for lending. Results indicated that corruption adversely affects bank lending.

Chen et al. (2015) investigated the impact of corruption on banks' risk-taking behavior, using bank-level data from more than 1200 banks in 35 emerging economies during the period 2000–2012. They found consistent evidence that higher levels of corruption increase the risk-taking behavior of banks.

Bougatef (2016) investigates the impact of perceived corruption on bank performance in Tunisia over the period of 2003-2014

using the GMM technique. The findings of the study indicate that the perceived level of corruption exhibits a positive influence on bank performance, while an increase in the level of corruption benefits the bank in improving performance.

Son et al. (2017) examined the impact of corruption on the soundness of banking systems using 102 middle-income countries in 6 regions. The findings showed that corruption exacerbates the soundness of banking systems in those countries. This implies that increased corruption leads to banks more prone to taking risks and a rise in non-performing loans, rendering a higher probability of crises.

Nurhidayat and *Rokhim* (2018) investigated the impact of corruption, anti-corruption commission, and government intervention on bank's risk-taking using banks in Indonesia, Malaysia, Thailand, and South Korea during the period 1995-2016. Their results showed consistent evidence that higher levels of corruption and government intervention in crisis-situation will increase the risk-taking behavior of banks.

Toader et al. (2018) investigated with GMM estimators the effect of corruption on banking stability using 144 commercial banks from 17 countries in Central and Eastern Europe, analyzed within an eight-year period from 2005 to 2012. The analysis revealed that a lower level of corruption had a positive impact on bank stability and is associated with fewer credit losses and with more moderate credit growth.

Ozili (2019) examined bank income smoothing in Africa - focusing on the role of corruption in influencing income smoothing using 302 African banks from 2004 to 2013 with the GMM technique. The main message of this paper is that corruption is significant and positively associated with income smoothing among African banks.

Bolarinwa and *Soetan* (2019) investigated

the effect of corruption on bank profitability using samples of banks from highly corrupt and the least corrupt countries between 2011 and 2017. We used a system GMM technique. The empirical results show that corruption is important in explaining the profitability of commercial banks in both developed and emerging countries. While it has mixed effects in emerging countries, the only positive effect is validated in developed countries.

Ali et al. (2019) aim to explore the impact of corruption on bank stability of the banking system in Pakistan using Panel cointegration tests. Their sample is confined to 24 retail banks, which include 5 Islamic and 19 conventional banks during the period of 2007-2015. Their findings suggest that corruption exerts a positive impact on bank stability.

Németh et al. (2019) aim is to examine the methodological relevance of the best-known corruption perception index calculation. They pointed out that although CPI contains very detailed indicators in the composite index, The CPI does not use tools to objectively measure corruption risks and controls and does not examine the regulatory environment and institutional system responsible for reducing corruption. Therefore, development-facilitating measuring systems that can be used efficiently to reduce corruption are required.

In addition these studies, it has seen papers in related with different dimensions of corruption like this with capital flight (Mwangi et al., 2019; Aloui, 2019), with political instability (Erkal et al., 2014; Kaplan and Akçoraoğlu, 2017; Shumetie and Watabaji, 2019), with government debt (Apergis and Apergis, 2019), economic growth (Frolova et al., 2019; Gründler and Potrafke, 2019; Tidiane, 2019).

As is seen in literature, the studies about this topic generally have a deal with banking sector and little stock market. In this study, to be more inclusive, instead of taking separately banking sector and stock market indicators, from here, we investigate to financial development of countries. Financial development covers all financial institutions including banking sector and the stock market. In addition, it is not seen paper which investigated observed countries. This ability to give contribution to literature and similar countries.

DATA AND METHODOLOGY

We use panel regressions to examine the effect of corruption perception on financial development in Eastern Europe and Central Asia. These countries are given in the appendix.

The use of panel data analysis provides some advantages due to the use of time-series and cross-sectional analysis, data quality, and increasing the amount of analyst, compared to the situation in the methods used to separate, allowing you greater flexibility (Baltagi, 2005).

This study extracted the yearly data of 19 countries from various sources and the sample period covered from the year 2012 to 2017. 2018 data of some variables are not published yet. For this reason, we take until 2017. Since there are missing data some variables, unbalanced panel data analysis is used to increase the sample size.

The reason behind the selection of the sample is due to the rapid economic development of Eastern Europe and Central Asia countries in recent years. Information or data related to macroeconomics and banking sectors were extracted from the World Development Indicator database. Meanwhile, the data related to corruption perception were extracted from Transparency International.

Scholars regressed economic growth on three prominent corruption measures: the International Country Risk Guide (ICRG)

index, the World Governance Indicators (WGI) and Transparency International's Corruption Perception Index (CPI). The CPI is often considered to be an especially suitable measure for corruption because the ICRG index measures investment risk of corruption rather than corruption per se, and the WGI's "Control of Corruption" subcomponent has been criticized for several methodological issues (Gründler and Potrafke, 2019). The measure of corruption used in this paper is the Corruption Perception Index (CPI).

Since 1995, Transparency International has been annually publishing the results of the Corruption Perception Index, which has been established to measure corruption perception. The composite index of the CPI is calculated using 13 data sources, which include both directly available data sources and only commercially available data sources (Németh et al., 2019).

Note that the Corruption Perception Index (CPI) is the scoring and ranking introduced by Transparency International. The index captures the extent of corruption and takes the scale of CPI ranged from 0 (high corruption) to 10 (low corruption), with 0 reflecting a high level of corruption in a country and 10 reflecting a low level of corruption in a country. To simplify the interpretation of results, we transform the index such that a higher value implies higher corruption. The CPI corruption index is one of the most commonly used measures of corruption in the empirical corruption literatüre such as Ayaydın and Baltacı 2013; Anaere 2014; *Ming et al.* 2018; *Gjeçi* and *Marinč* 2018; Toader et al. 2018; Nurhidayat and Rokhim 2018; *Tidiane* 2019; Ozili 2019; *Gründler* and *Potrafke* 2019; Ali et al. 2019. The CPI in individual years before the year 2012 included data for different components and time periods to measure perceived corruption perception across continents. In this study, because of the

earlier version of the CPI is not comparable across time, we preferred data for after 2012.

The models are as follows:

$$FD_{it} = \beta_0 + \beta_1 FD_{i(t-1)} + \beta_2 CPI_{it} + \beta_4 GOVERN_{it} + \beta_5 OPEN_{it} + \beta_6 GDP_{it} + \varepsilon_{it} \qquad (1)$$

for i = 1, 2, ..., N and t = 1, 2, ..., T, where β_0 denotes the country-specific fixed effect, and ε_{it} is an idiosyncratic error component. Where FD is Financial Development Index, CPI is Corruption Perception Index, GOVERN is government size measured by final consumption expenditure (% of GDP), OPEN is openness measured by imports of goods and services (% of GDP), and GDP is growth rate defined as the rate of change in the gross domestic product.

The financial development index is constructed using a standard three-step approach found in the literature on reducing multidimensional data into one summary index:

- normalization of variables;
- aggregation of normalized variables into the sub-indices representing a particular functional dimension; and
- aggregation of the sub-indices into the final index (IMF and World Bank database).

The existing empirical studies fail to consider this multidimensional approach to construct the financial development index.

There is a vast body of literature estimating the impact of financial development on economic growth, inequality, and economic stability. A typical empirical study approximates financial development with either one of two measures of financial depth – the ratio of private credit to GDP or stock market capitalization to GDP. However, these indicators do not take into account the complex multidimensional nature of financial development. To correct this omissin, the

Financial Development Index was developed fort he IMF Staff Discussion Note "Rethinking Financial Deepening: Stability and Growth in Emerging Markets". It summarizes how developed financial intitutions and financial markets are in terms of their

- depth (size and liquidity),
- access (ability of individuals and companies to Access financial services), and
- efficiency (ability of institutions to provide financial services at low cost and with sustainable revenues and teh level of activity of capital markets).

In this context, a total of nine indices have been established that evaluate how financial systems develop across countries at varying levels of abstraction. The six sub-level sub-indices were created using a list of indicators to measure how deep, accessible and efficient financial institutions and financial markets are. These sub-indices are called FID, FIA, FIE, FMD, FMA and FME; where I and M denote institutions and markets and D, A and E denote depth, reach and efficiency. These sub-indices fall into two upper sub-groups, FI and FM, which measure how advanced financial institutions and financial markets are in general. Finally, the FI and FM sub-indices are aggregated as the general measure of financial development - the FD index (Svirydzenka,2016).

This study extends the existing literature considering all the dimensions of financial development (depth, access, efficiency, and stability) suggested by the IMF database to construct the financial development index for Eastern Europe and Central Asia countries. The financial development index has been chosen because it is good able to capture different dimensions of financial development. It is an aggregate of the financial institution's index and the financial markets index.

In the presence of lagged dependent variables, *Arellano* and *Bond* (1991) proposed using the difference Generalized Method of Movements (GMM) estimation. The difference GMM estimator removes the fixed effects by transforming the data and addresses the endogeneity issue by using lagged values as instruments. In a later study, *Blundell* and Bond (1998) show that the difference GMM performs poorly, especially when the variables are close to a random walk – the lagged levels are not strong instruments for first-differenced variables. Moreover, when the number of time periods is small and the dependent variable is highly persistent, the difference GMM may be subject to a huge sample bias (Alonso- Borrego and Arellano, 1999). In this study, the time size (T: from 2012 to 2017 as yearly) in the data set used is shorter than the bank size (N: 19 countries). Hence, following Arellano and Bover (1995) and Blundell and Bond (1998), we also present the results using the system GMM estimator. The system GMM estimator improves efficiency by using both lagged levels as well as lagged differences.

We report results employing both the difference and system GMM estimators to ascertain the robustness of results. First of all, it is given descriptive statistics and correlation for variables.

When *Table 1* is examined; The average of the Financial Development Index, which is the dependent variable of the countries subject to the research, is approximately 0.25. As can be seen from Table 1, the Corruption Perception Index, which is considered as the perception index, is found to be the highest 9 and the lowest 3.

In *Table 2*, we present the correlations between our variables. Variable Financial Development Index is positively correlated with corruption, but negatively correlated with government size and openness. Furthermore, variable Financial Development Index is positively correlated with GDP growth. The

Table 1

DESCRIPTIVE STATISTICS OF VARIABLES

	FD	CPI	GOVERN	OPEN	GDP
Mean	0.254569	6.447368	87.05992	48.47138	5,463.5650
Maximum	0.519036	9.000000	129.9154	95.27174	16,007.0900
Minimum	0.073776	3.000000	21.01897	14.87111	802.5180
Std. Dev.	0.113598	1.624438	17.69396	16.68275	3,379.1870
Number Obs.	102	114	109	114	114

Source: own edited

Table 2

CORRELATION MATRIX

Correlation	FD	CPI	GOVERN	OPEN	GDP
FD	1.000000				
CPI	0.704474	1.000000			
GOVERN	−0.277883	−0.116039	1.000000		
OPEN	−0.497511	−0.360802	0.561563	1.000000	
GDP	0.682320	0.446132	−0.628569	−0.566547	1.000000

Source: own edited

highest correlation between variables observed that between FD and CPI (0.704). The other correlation value is low than this value.

Table 3 presents the analysis results using the GMM estimators Arellano-Bond (1991) and Arellano-Bover (1995), which are frequently used and popular in the dynamic panel literature. GMM estimation results are given in the table below.

Measuring the efficacy of the variables, the J test, also known as the Sargan test, is meaningless and the acceptance of the null hypothesis indicates that the variables are sufficient and valid, but gives more confidence to the model. Since the J-statistic probability value is meaningless in all models, independent variables used are considered significant. In

addition, the p-value of AR (2) Arellano and Bond test is higher than 5% and supports our estimation results.

Table 3 shows both Arellano-Bond and Arellano-Bover estimator results. Firstly, the variable, the determinant of corruption perception, is insignificant according to the results obtained for the Arellano-Bond. Arellano-Bover estimator shows that corruption perception degree is a negative effect on financial development but this result is not significant as statistically. That is, any change in CPI does not affect FD like this *Gjeçi* and *Marinč* 2018; *Asongu* and *Odhiambo* 2019; Ozili 2019. According to Arellano-Bond estimator results, the control variable GDP is significant at 1% and this coefficient

Table 3

DYNAMIC PANEL DATA ANALYSIS FORECAST RESULTS

	BOND	BOVER
	FD	FD
FD (-1)	−0.240178 (0.0084)*	−0.257985 (0.0103)**
CPI	0.000851 (0.4638)	−0.001420 (0.1941)
GOVERN	−0.000561 (0.0704)	−0.001374 (0.0001)*
OPEN	0.000316 (0.1613)	0.001025 (0.0000)*
GDP	−2.894399 (0.0000)*	−5.301670 (0.0000)*
AR(2)	0.1092	N/A
SARGAN	0.239195	0.450655

Comment: All models are estimated by the GMM system and are significant in all cases. FD (-1) is considered as a lag variable. AR(2) is a test for second-order serial correlation in the first-differenced residuals, under the null of no serial correlation. Sargan test for the validity of over-identifying restrictions, distributed as indicated under the null. * and ** denote significance at the 1 and 5 percent level, respectively.

Source: Based on Arellano-Bond and Arellano-Bover's own edited

is −2.894399. According to Arellano-Bover estimation results, GOVERN and OPEN variables were found to be statistically significant at 1% level. According to these results, one unit increase in GOVERN results in 0.001374 decreases in FD, while one unit increase in OPEN means 0.001025 increase in FD.

In this study, the effect of corruption perception index representing corruption perception levels on financial development index was tried to be measured. In this context, corruption perception index is thought to be closely related to the development levels of the countries. When examining the corruption perception index, it is thought that it will be beneficial to examine the social and economic development levels and thus socioeconomic structures of the countries. A combination of technological advancements, transparency in government policies, sound monetary and fiscal policies and control of corruption may help countries in order to reach higher financial development. It is difficult to say that a closed economy with a weak financial sector cannot play a role in global markets and that they have adopted the perception of corruption.

Corruption levels of countries differ according to their economic and social structure. In reality, corruption may be higher in countries with no financial development if it is not accompanied by good governance. In this contex advances in financial development

and the absence of any impact on CPI are negative for the countries under study. Financial development is the key to the success of the perception of corruption. In recent years, almost all countries have developed corruption perception strategies. The effect of the increase in perception of corruption on financial development; Eastern Europe and Central Asia are statistically insignificant. In these countries where the variable is found to be statistically insignificant, since the perception of corruption is low compared to high developed countries, it is seen that the increase in the perception of corruption is expected to have a meaningless effect on financial development. Especially since these countries are the countries with the lowest level of development, education and political stability, in other words, the level of corruption perception is expected to be low due to the high level of financial uncertainty. Furthermore, it is considered that the perception of corruption has not developed and has no effect on the level of financial development due to the possibility that there are not many regulations in this field despite this deficiency.

CONCLUSION

Corruption perception causes projects to need more capital than other projects, leading to a decline in the quality of private investments and lowering the ability to make payment of loans. It is stress that the corruption perception level aggravates the problem of impaired financing (Son et al., 2017).

In this study, a model is developed to examine the impact of corruption perception on financial stability for a sample of 19 Eastern Europe and Central Asia countries using the Generalized Method of Moment (GMM) approach during the period 2012-2017. Results show that there not a relationship between the level of corruption perception and financial system improvement. In fact, these results suggest that corruption perception isn't to lead to financial development in these countries.

Developed countries may be less exposed to corruption perception due to their highly hierarchical structures. Hierarchical structures receive little discretion, successfully preventing corruptive behavior. Less developed countries may avoid corruptive practices in the face of intense regulatory scrutiny. We find that a strong rule of law makes the relationship between corruption perception and financial development no pronouns. The findings broadly show that policies aren't an additional benefit improving governance standards. This result can be evaluated as a positive for financial structure in these countries.

The findings of this research helped lay the groundwork for further research. One limitation of this present study is that it provides an indirect implication of corruption perception on financial development. Another limitation present is the lack of time period. Future research could investigate with other countries the relation between corruption perception and financial markets. Or, future research could investigate the effect of corruption perception on banking system and stock market as separate. In this way, it is possible to make different inferences.

Table A.1

LIST OF COUNTRIES USED IN THIS PAPER'S ANALYSIS

Georgia	Albania
Montenegro	Armenia
Belarus	Moldova
Turkey	Ukraine
Serbia	Kazakhstan
Bosnia and Herzegovina	Kyrgyzstan
Kosovo	Russia
Macedonia	Azerbaijan
Tajikistan	Uzbekistan
Turkmenistan	

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