Does Government Size Cause Corruption?: A Comparative Study in Countries with Different Levels of Democracy

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ABSTRACT

Corruption is a major issue in the economy. As a result, governments adopt policies and procedures to limit its continuation. Theoretical and empirical perspectives differ on the extent to which government size influences the level of corruption. Some believe that a huge government is a stimulus for corrupt behaviors, while others believe that it is not. This study aimed to investigate if government size affects corruption in democratic and authoritarian nations. For the years 2003–2021, data were gathered for 39 authoritarian regimes and 22 democratic regimes. Using panel data and the Generalized Method of Moment (GMM) method, the hypothesis was experimentally tested. In democratic countries, bigger government size was connected with greater corruption, whereas in authoritarian regimes, government size had no effect on corruption. On the contrary it was discovered that both democratic and authoritarian nations benefitted from more transparency due to the function of legislation and educational attainment. It was also found that increasing per capita GDP helped to reduce corruption in authoritarian countries but did not explain corruption in democratic countries.

Keywords: Corruption, government size, democracy, GMM

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INTRODUCTION

Corruption is a widespread problem that countries try to tackle, and one possible factor behind it is the extent of government involvement. There are two contrasting theories about the connection between government magnitude and corruption.

The first, is that a larger government means greater corruption. The large size of the government provides greater opportunities for politicians and government employees to pursue rent-seeking opportunities. In essence, the presence of bigger governments amplifies the potential gains from engaging in illegal activities, thereby creating a motivation for individuals to partake in corrupt practices.

The second, confirms that a larger government reduces corruption because larger governments adopt checks and balances that strengthen accountability and transparency. Therefore, increasing the size of the government can reduce corruption. This perspective is based on the observation that developed countries often have bigger government structures and lower levels of corruption when compared to developing nations. Evidence indicates that despite the large size of governments in the Scandinavian countries compared to the size of the governments of other industrialized states, they are the least corrupt (Alam et al. 2019).

In the last three decades, the importance of combating corruption at the global level has been increasing. One of the factors influencing corruption is the general trend of increasing government activity and the increasing regulatory role that governments play in economics. These increasing roles of the government can be reflected in corruption. On the other hand, the impact of administration size on corruption can be related to the level of democracy (Ahmad et al., 2021; Maizatul et al., 2016). It is, therefore, important to explore how varying government size affects corruption in light of varying levels of democracy.

The basic hypothesis of the research was greater government necessarily leads to greater corruption. However, this relationship is restricted by the difference in the level of democracy according to the two sub-hypotheses below:

1. In democratic countries, the large government size does not have an effect on corruption, or its effect is a brake on corruption.

2. In authoritarian countries, the larger government size helps increase corruption.

The study aimed to show the extent of the impact of government size on corruption and to compare this effect between countries with democratic and authoritarian countries.

This study is significant as it aims to contribute to the ongoing academic and policy discourse on the relationship between government size and corruption. By analyzing countries with different levels of democracy, we can gain a comprehensive understanding of the contextual factors that influence this relationship. Moreover, the findings of this study can inform policymakers and government officials in designing more effective strategies to tackle corruption and promote good governance.

The target stakeholders who will benefit from this study include government officials, policymakers, researchers, and non-governmental organizations (NGOs) working in the field of governance and anti-corruption. Government officials can utilize the findings to assess the impact of their policies and make informed decisions on government size and its implications for corruption. Policymakers can use evidence-based insights to design and implement more effective anti-corruption measures. NGOs working in the field of governance can leverage the findings to advocate for transparent and accountable governance practices.

MECHANISMS OF THE IMPACT OF GOVERNMENT SIZE AND DEMOCRACY ON CORRUPTION

Mechanisms of the Impact of Government Size on Corruption

Economists believe that corruption is a product of the failure of markets and governments to protect individual rights. Although government intervention in order to provide public services, such as infrastructure, is necessary and important to promote development and employment,

excessive intervention may prevent competition in the market, and government failure is more problematical than market failure (Kotera et al., 2010, p. 3). The predominant belief about the connection between dishonesty and government size is that when the government becomes more involved in the economy, it creates more opportunities for politicians to engage in unethical practices. A larger government offers greater potential for politicians and bureaucrats to seek personal gain through illegal means. Essentially, when governments expand in size, the potential benefits of engaging in corruption also increase, which serves as an incentive for more corrupt activities to take place (Rose-Ackerman, 1999; Goel et al., 1998; Ondo et al., 2021; Kotera et al. 2010).

If the size of the government is determined by the number of government employees and their operating expenses, like their wages and salaries, then having too many employees can result in more corruption (Abdillah et al., 2021). This is especially true if the new employees are primarily interested in personal gain from their position and lack motivation to work hard and improve their skills (Anita et al., 2021; Baklouti & Boujelbene, 2016, p. 85).

Corruption is associated with larger governments, where a larger government size means more officialdom, which creates more chances for employees to demand bribes and forces people to bribe government workers in order to bypass bureaucratic barriers (Pavia et al., 2021, p. 276; Arvate et al., 2010, p. 1014).

Others believe that a strong government is more capable of fighting corruption than a weak government. Government size measured by the number of public resources at its disposal enables it to better monitor public servants, punish bad officials and ensure transparency in the conduct of public affairs (Said et al., 2016). Within the framework of the developed countries themselves, it is noted that the government size in the Scandinavian countries is greater than the government size of other developed countries, but it is less corrupt (Kotera et al., 2012, p. 2340; Salih, 2013; Picon, 2019)

Also, the quality of government management of public resources enables it to provide appropriate wages to public service employees and thus reduces the temptation to engage in corruption. Likewise, a strong

government with large resources is often more effective than a weak government in addressing social inequality that strengthens the social contract between citizens and the government and thus provides an environment conducive to the application of the law, which is reflected in reducing opportunities for corruption.

Mechanisms of the Impact of Democracy on Corruption

In a developed democracy, the government functions well and effectively, side by side with the effective participation of the people in which a mixture of free media, an independent judiciary, active and effective police, and people's participation in the threat of corrupt behavior is represented. Hence, the wider the democratic freedoms and the greater the effectiveness of democratic institutions, the lower the corruption. So, in institutionally consistent and well-functioning democracies, the rule of law has a dampening effect on corruption despite the increase in corruption that occurs in the early stage of democratization. (Saha & Campbell, 2007, p. 6-8)

When an aspect of the democratic system weakens or enters into a crisis, institutional controls are absent, politicians and influential people's freedom of action increases, courts lose their independence, and restrictions are repeated on the space of civil society and the political rights of citizens, corruption spreads widely. (Drapalova, 2019, p. 7)

Democratic systems experience less corruption because freedom of association and the press put pressure on nepotism and corruption practices and expose misuse of public funds. Rival parties, because of their desire to be elected, have incentives to detect and expose abuses of office (Treisman, 2000, p. 433).

Empirically, Fréchette (2006); Ghaniy and Hastadi (2017); Serra (2006); Treisman (2000); Doc (2021); Picon and Boehm (2019); Lazreg and Mohammed (2019); Brueckner Markus (2021) and Baklouti and Boujelbene (2022) found evidence that democracy and political freedom reduce corruption.

The question in this context is: Why diagnose cases in which political liberalization leads to an upsurge in corruption rather than a decline in it, as

in the young democracies of Southeast Asia, Latin America, the countries independent of the former Soviet Union, the Philippines, Argentina, Russia and India? The reason for this is that the new arrangements imposed by the application of new democracies lead to confusion in society because the foundations of democratic application have not yet matured. According to Sung (2004, p. 180), corruption is seen as a temporary occurrence resulting from a lack of liberal values and efficient institutions that promote proper bureaucratic procedures. By allowing citizens greater access to government officials, young democracies create opportunities for people to exploit the public sector and engage in corrupt practices. These democracies often lack proper checks and balances and transparency measures (Rock, 2007, p. 2).

DATA AND METHODOLOGY

The Model

A multiple regression model was built that took into account the influence of the size of government on corruption, in consideration with the influence of other variables that explain corruption levels, namely, per capita GDP, the average number of education years and the rule of law. Thus, the model takes the following standard formula:

$$CPI_{it} = \beta_{0i} + \beta_1 GS_{it} + \beta_2 GDP_{it} + \beta_3 TL_{it} + \beta_4 LR_{it} + U_{it} \quad \ldots\ldots\ldots\ldots (1)$$
$$i = 1,2,\ldots\ldots,n \;\; ; \;\; t=1,2,\ldots\ldots,T$$

Since:

The dependent variable (CPI): Corruption Perception Index, issued by Transparency International (TI). It is a numeric indicator whose value lies between (0-100). Whenever the indicator is close to zero, it indicates a high degree of corruption (meaning that corruption is high); when the value of this indicator is high and close to (100), this indicates high transparency (meaning that corruption is low).

1. The explanatory variables:
   Government Size Index (GS): This index represents one of the five measures that make up the Economic Freedom Index, published by

the Fraser Institute. These five components are designed to measure all key aspects of government. The government size index ranges between (0-10), where (0) indicates the size of a larger government, while (10) indicates the size of a smaller government; in other words, the index measures how small the size of the government is.

2. Average per capita GDP: which was expressed as the average per capita GDP (at current prices / US dollars). According to the World Bank (BW), It is expected that its impact will limit corruption, given that the motives of corruption in large part are the low average GDP, which is not sufficient to meet the requirements of living.

3. Education (TL): expressed as the approximate number of years of schooling. Taken from the United Nations Development Program (UNDP), It is expected that its effect will be a brake on corruption because corruption is most likely linked to a lack of education.

4. Role of Law Index (LR): This indicator is one of the six government indicators that were issued by the World Bank to measure the law and social interactions by virtue of law and regulations. In other words, this indicator measures the extent of confidence in the application of laws and legislation by the government towards its clients. The value of this indicator ranges between (+2.5), which indicates an increase in the capability of government to contrivance laws and legislation (meaning that the size of the law is strong), and between (-2.5), which indicates a weakness in the aptitude of government to contrivance laws and legislation (meaning that the size of the law is weak). This indicator has been adapted to start from the value (0) and end with the value (5) by adding the value (2.5) to all variable observations; This is in order to avoid the problem of negative numbers when taking the logarithm. It is expected that the impact of this variable will restrict corruption, as law enforcement will be a complementary link to deter corruption as illegal behavior within the framework of society.

CPI data was collected from the data published by Transparency International, while the government size index was derived from the data of the World Economic Freedom Index published by the Fraser Institute.

β_{0i}: represents the segment parameter or constant in the model, which is the average corruption in the case of no effect.

β_1, β_2, β_3, β_4,: represent the parameters or trends of the model, which measure the effect of government size and some other explanatory variables on levels of corruption.

U_i: represents the disturbance limit, which includes all other unmeasured variables that are not included in the model and that have an impact on corruption, such as wars, security and political stability, poverty, unemployment, taxes, and others.

In order to avoid the expected non-linear relationships between the variables and to achieve stability in the variances as well as to obtain high-quality results, the logarithm of the natural basis will be taken for all variables and for both models and accordingly, the regression coefficients estimated for the model will be converted into elasticities. That is, both models will be, after taking the logarithm of the natural base of all variables, as follows:

$$\text{Ln } CPI_{it} = \beta_{0i} + \beta_1 \text{Ln } GS_{it} + \beta_2 \text{ Ln } GDP_{it} + \beta_3 \text{Ln } TL_{it} + \beta_4 \text{Ln } LR_{it} + U_{it} \quad \ldots\ldots\ldots\ldots (2)$$

In order to estimate and analyze model (2), Panel data were used for two groups of countries for the period (2003-2021). Two groups of countries were selected:

The first: countries with democratic systems, in which civil authorities and basic governmental freedoms are not only valued but also strengthened by a political culture conducive to the flourishing of autonomous ideologies. The value of the democracy index in these countries ranges between (8-10) (Economist Intelligence, 2022, p. 67). This group consisted of (22) countries (Iceland, Canada, New Zealand, Norway, Sweden, Finland, Australia, Denmark, Germany, Ireland, Luxembourg, Netherlands, Switzerland, Taiwan, Austria, Chile, Costa Rica, Japan, South Korea, Spain, United Kingdom, and Uruguay).

The second: Countries with authoritarian countries, in which political heterogeneity has disappeared or was very limited. The value of the democracy index for this group ranges from (0-4) (Economist Intelligence, 2022, p. 67). This group consisted of (39) countries (Algeria, Angola, Azerbaijan, Bahrain, Belarus, Burkina Faso, Burundi, Cambodia, Cameroon, Chad, China, Egypt, Estonia, Ethiopia, Gabon, Iran, Jordan, Kazakhstan, Kuwait, Laos, Libya, Mali, Mauritius, Mozambique, Myanmar, Nicaragua, Niger, Oman, Qatar, Russia Rwanda, Saudi Arabia, Sudan, Tajikistan, United Arab Emirates, Venezuela, Vietnam, Yemen, and Zimbabwe).

RESULTS AND ANALYSIS

Estimate the Impact of Government Size on Corruption in Democratic Countries

Stationary test

Table 1 displays the findings of the Stationary test for the variables of the model of democratic countries, using the Im, Pesaran, Shin test.

Table 1: Results of Unit Root Test for Democratic Countries Model

Im, Pesaran, Shin Test				
Variables	At Level		At First Difference	
	Individual Intercept	Intercept Individual & Trend	Individual Intercept	Intercept Individual & Trend
LN(CP-1)	-0.47749	-3.48221	-14.2706	-10.6277
prob.	(0.3165)$^{n.s}$	(0.0002)*	(0.0000)*	(0.0000)*
LN(GS)	-1.91185	-2.63639	-6.33557	-7.29967
prob.	(0.0279)**	(0.0042)*	(0.0000)*	(0.0000)*
LN(GDP)	-10.0766	-8.12604	------	------
prob.	(0.0000)*	(0.0000)*	------	------
LN(TL)	-4.78044	-8.80953	------	------
prob.	(0.0000)*	(0.0000)*	------	------
LN(LR)	-3.13805	-2.15323	------	------
prob.	(0.0009)*	(0.0157)**	------	------

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
- (n.s) indicates non-significant
Source: Source: Authors' work depending on Eviews 12 output

The results showed that both the CPI and the government size index were stationary at the first difference, and this indicated the acceptance of the null hypothesis, which stated that these variables are not static at the level, and therefore, we took the first differences for them. As for the rest of the explanatory variables (average per capita GDP, level of education, and the role of law), they all appeared Stationary at the level.

Co-Integration Test

Table 2 depicts the findings of the cointegration test of the model for democratic states, and it was noted that there were four tests out of a total of seven tests that confirmed the presence of a cointegration association between the dependent and explanatory variables at (1%), which designated the presence of a long-term association between these variables in democratic countries.

Table 2: Cointegration Test for Democratic Countries Model

Pedroni Residual Cointegration Test				
Variables: LN(CPI) LN(GS) LN(GDP) LN(TL) LN(LR)				
Sample: 2003:2021				
Included observations: 418				
Cross-sections included: 22				
Alternative hypothesis: common AR coefs. (Within-dimension)				
	Statistic	**Prob.**	**Weighted Statistic**	**Prob.**
Panel v-Statistic	-2.811536	(0.9975) n.s	-4.508260	(1.0000) n.s
Panel rho-Statistic	2.683938	(0.9964) n.s	3.117525	(0.9991) n.s
Panel PP-Statistic	-7.279628	(0.0000)*	-9.931702	(0.0000)*
Panel ADF-Statistic	-6.468803	(0.0000)*	-9.769195	(0.0000)*
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	4.375439	(1.0000) n.s		
Group PP-Statistic	-15.83572	(0.0000)		
Group ADF-Statistic	-9.608510	(0.0000)		

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
(n.s) indicates non-significance.
Source: Source: Authors' work depending on Eviews 12 output.

Regression Results

Table 3 displays the findings of the regression of the corruption index on the explanatory variables in countries with democratic systems, applying Panel (GMM).

Table 3: Panel (GMM) Estimates for Democratic Countries Model

Method: Panel Generalized Method of Moment (GMM)				
Dependent Variable: LN(CPI)				
Transformation: First Differences				
Sample (adjusted): 2005 2021				
Periods included: 17				
Cross-sections included: 22				
Total panel (balanced) observations: 374				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LN [CPI (-1)]	0.745758	0.021203	35.17280	(0.0000)*
LN(GS)	0.065288	0.014156	4.612170	(0.0000)*
LN(GDP)	-0.002219	0.003824	-0.580393	(0.5620)$^{n.s}$
LN(TL)	0.113376	0.020685	5.481044	(0.0000)*
LN(LR)	0.112805	0.034510	3.268821	(0.0012)*

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
(n.s) indicates non-significance.
Source: Source: Authors' work depending on Eviews 12 output.

Table 3 shows the results of estimating the effect of explanatory variables on the CPI in democratic countries; accordingly, we concluded the following:

The value of the CPI came with a positive sign in the first slowdown period, meaning that there was a direct relationship between the CPU and the first slowdown period at (1%), as an increase in LN [CPI (-1)] by (1%) will lead to a rise in the CPIby (0.746%). This suggested that corruption, as soon as it occurs in any country, increases in frequency from time to time.

There is a direct and significant correlation between the government size index and the CPI at (1%), and an upsurge in the government size index by (1%) will lead to an increase in the CPI by (0.065%). This result meant that a that a lower government size index (which means a large government

size) will lead to to a lower corruption perceptions index (meaning greater corruption). That is, the larger the government, the greater the corruption. These findings support evidence that big government provided more opportunities for political rent-seeking, which makes politicians and bureaucrats more corrupt (Kotera et al., 2010, p. 3).

There was a straight and significant association between the level of education and the CPIat (1%), which means that a rise in the level of education by (1%) leads to an increase in the CPI (decreased corruption) by (0.113%). This result confirmed that interest in education leads to restricting corruption and moving closer to transparency. This is consistent with the results of experimental studies, such as (Saha, 2009; Doc, 2021; Shabbir & Anwar, 2007). These results support the hypothesis that education, eradicating illiteracy, and achieving higher levels of human capital development reduce corruption because it increases the chances of discovering and punishing corrupt action, thus reducing corruption (Mangafić & Veselinović, 2020: p. 8).

There was a substantial association between the role of law and the CPIat (1%), meaning that a rise in the role of law index by (1%) will lead to a rise in the CPI (decreased corruption) by (1.113%). This result supports the results of previous empirical studies, such as (Ali & Isse, 2003; Salih, 2013; Abu & Staniewski, 2019); this result reinforces the hypothesis that the rule of law rises the likelihood of detecting and punishing illegal rent-seeking behavior, and reduces corruption (Elbahnasawy & Revier, 2012: p. 312).

It was not proven that there was a significant association between the average per capita GDP and the CPI in countries with democratic systems, and this meant that this variable had no significance in explaining corruption.

It was noted from the results that the most important variables in explaining corruption behavior in democratic countries were education and the rule of law, then government size.

Estimate the Impact of Government Size on Corruption in Authoritarian Countries

Stationary Test:

Table 4 shows the results of the Stationary test for the variables of the model of countries with authoritarian countries, using the Im, Pesaran, Shin test.

Table 4: Results of the Unit Root Test for the Authoritarian Countries model

Im, Pesaran, Shin Test				
Variables	At Level		At First Difference	
	Individual Intercept	Intercept Individual & Trend	Individual Intercept	Intercept Individual & Trend
LN(CP-1)	-1.75168	-3.89615	------	------
prob.	(0.0399)**	(0.0000)*	------	------
LN(GS)	-4.67111	-5.86711	------	------
prob.	(0.0000)*	(0.0000)*	------	------
LN(GDP)	-8.95072	1.58210	-10.2154	-10.8268
prob.	(0.0000)*	(0.9432)n.s	(0.0000)*	(0.0000)*
LN(TL)	-3.71075	-1.14796	-15.0842	-14.3642
prob.	(0.9999)n.s	(0.8745)n.s	(0.0000)*	(0.0000)*
LN(LR)	-1.84591	-3.05077	------	------
prob.	(0.0325)**	(0.0000)*	------	------

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
(n.s) indicates non-significance.
Source: Source: Authors' work depending on Eviews 12 output.

The results of the stability test for the variables of the second model in countries with authoritarian regimes showed that the corruption perception index, the government size index, and the role of law all appeared stable in level. The variables of average per capita income and level of education stabilized at the first difference.

Co-integration Test: Table (5) shows the co-integration test of the model for authoritarian countries. It was noted that there are four tests out of a total of seven tests that confirmed the existence of a cointegration relationship between the dependent variable and the explanatory variables at (1%), and this indicated the existence of a long-term relationship between these variables in countries with authoritarian countries.

Table (5): Co-Integration Test for Authoritarian Countries Model

Pedroni Residual Cointegration Test				
Variables: LN(CPI) LN(GS) LN(GDP) LN(TL) LN(LR)				
Sample: 2003:2021				
Included observations: 741				
Cross-sections included: 39				
Alternative hypothesis: common AR coefs. (Within-dimension)				
	Statistic	**Prob.**	**Weighted Statistic**	**Prob.**
Panel v-Statistic	-2.375385	(0.9912)$^{n.s}$	-4.399329	(1.0000)$^{n.s}$
Panel rho-Statistic	4.114550	(1.0000)$^{n.s}$	4.032544	(1.0000)$^{n.s}$
Panel PP-Statistic	-3.773324	(0.0001)*	-9.117220	(0.0000)*
Panel ADF-Statistic	-3.713082	(0.0001)*	-8.002077	(0.0000)*
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	**Prob.**		
Group rho-Statistic	6.036221	(1.0000)$^{n.s}$		
Group PP-Statistic	-13.29263	(0.0000)*		
Group ADF-Statistic	-7.673199	(0.0000)*		

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
(n.s) indicates non-significance.
Source: Source: Authors' work depending on Eviews 12 output.

Regression Results

Table (6) shows the results of the regression of the CPI on the explanatory variables in countries with democratic countries by applying panel (GMM).

Table (6): Panel (GMM) Estimates for Authoritarian Countries Model

Method: Panel Generalized Method of Moment (GMM)				
Dependent Variable: LN(CPI)				
Transformation: First Differences				
Sample (adjusted): 2005 2021				
Periods included: 17				
Cross-sections included: 39				
Total panel (balanced) observations: 660				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
[LNCPI (-1)]	0.610230	0.017181	35.51787	(0.0000)*
LN(GS)	-0.024566	0.022994	-1.068376	(0.2857)$^{n.s}$
LN(GDP)	0.033309	0.011935	2.790895	(0.0054)*
LN(TL)	0.243854	0.043228	5.641089	(0.0000)*
LN(LR)	0.134364	0.105160	4.312564	(0.0000)*

(------) indicates that the variables are stable at the level.
(*, **, ***) indicate significance at the level of (1%, 5%, 10%), respectively.
(n.s) indicates non-significance.
Source: Source: Authors' work depending on Eviews 12 output.

Table (6) shows the results of the regression of the explanatory variables on CPI for authoritarian countries by means of the panel (GMM). Accordingly, we concluded the following:

The value of the CPI came with a positive sign in the first slowdown period, meaning that there was a direct relationship between the CPI and the first slowdown period with (1%), as an increase in [LNCPI (-1)] by (1%) will lead to a rise in the CPI by (0.610%). This suggested that corruption, as soon as it occurs in any country, increases in frequency from time to time.

The results did not prove a significant effect of the government size on the CPI in authoritarian countries. This result is contrary to the assumed behavior in the economic literature and contradicts the research hypothesis, which states that an increase in government size leads to greater corruption in countries with authoritarian countries. The explanation for this result lies in the fact that authoritarian countries, by their nature, are highly centralized, and their work systems impose severe penalties for corruption, which reduces the chances of corruption.

There was a direct and significant relationship between the average per capita GDP and the CPI at (1%), meaning that an increase in the average per capita GDP by (1%) will lead to a rise in the CPI (declining corruption) by (0.033). This result supports the results of empirical studies such as Doc (2021); Salih (2013); Shabbir & Anwar (2007); Saha (2009) and Lederman et al. (2005). This result reinforces the view that money paid to government officials as an act of corruption has a greater marginal value in poor economies in terms of the material well-being of government employees, and therefore, corruption is greater in low-middle-income economies (Gunardi, 2008, p. 22).

There was a direct and significant relationship between the level of education and CPI at (1%), meaning that an increase in the level of education by (1%) will lead to a rise in CPI (declining corruption) by (0.244%). This result confirmed that interest in education leads to restricting corruption and moving closer to transparency. This is consistent with economic literature and the results of empirical studies such as Saha (2009); Doc (2021); Shabbir & Anwar (2007), which confirmed that more education will lead to better results in combating corruption. These results support the hypothesis that we mentioned previously.

There was a direct and significant relationship between the role of the law and CPI at (1%), meaning that an increase in the role of the law by (1%) will lead to an increase in CPI (reducing opportunities for corruption) by (0.134%). These results support the hypothesis that we mentioned previously.

The results confirmed the great importance of education in reducing corruption in authoritarian countries, followed by the rule of law, then the per capita GDP, while it was found that government size was not important in explaining corruption.

CONCLUSION

The theoretical literature presents a dialectical relationship between corruption, government size, and democracy. In this research, we used data from a large sample of countries with varying levels of democracy to

explain the relationship between government size and corruption in light of varying democracy. It has been shown that once corruption episodes begin to take shape, corruption generates itself period after time and extends to ever-wider extents, whether in countries with democratic or authoritarian regimes. Therefore, governmental and popular measures aimed at combating corruption can be the tool that reflect this effect and generates forces within the corruption structure to end it.

On the other hand, broader government intervention in democratic countries did not addressed market failures and did not have a significant effect in restricting corruption, and this was reflected in an increase in the level of corruption. Hence, broader government intervention cannot be used to control corruption. Therefore, large government with enhanced democracy does not have an important role in restricting corruption cycles and thus decreasing corruption.

In authoritarian countries, the size of the government did not affect corruption, but law enforcement, along with the strength of the government, not its size, curbed corruption there. This is because authoritarian regimes, by their nature, are highly centralized, and their work systems impose severe penalties on corruption, which reduces the chances of its spread. But strengthening democracy alongside the rule of law in the state will move it from a state of curbing corruption through violence to curbing corruption through reforms and government spending and regulatory intervention that complements the role of the market.

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