Corruption, Governance, and Government Revenue

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Abstract

This study analyzes the complex relationship between corruption, governance, and government revenue. It explores some of the collective influence approaches to corruption and Governance on Government revenue. The panel data of ninety-six countries from 2005 to 2020 is being collected from the Corruption perception index (CPI), World development indicator (WDI), and worldwide Governance indicators (WGI). For the analysis, panel data fixed effect and D&K technique is used among corruption, governance, and Government revenue. The findings show that corruption significantly and negatively affects government revenue, while governance significantly and positively impacts government revenue. So, the government needs to improve the governance quality to enhance the tax revenue and control the corruption level in the economy.

Keywords: Corruption, Governance, Government Revenue

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INTRODUCTION

Corruption is not regarded as a separate issue of governance. It is one of the top priorities in administration modifications. Governance excellence is a severe aspect of the development process of any economy. The existence of tax evasion and corruption of public administrators is a communal phenomenon that can count to shrink revenue and hurt economic growth and development.[1] Since the mid-era 1990s, many international organizations have faced corruption problems, like United Nations, the World Bank, International Monetary Fund, and the American state, Organization for Economic Cooperation and Development, and non-government organizations.[2] Corruption is the maltreatment of trust for extra gain.[3] The existence of corruption led in two ways. First, corruption exists when it becomes a key part of social, economic, political, and government institutions. Every individual is captured as a corrupt entity, resulting in a state failing. Secondly, state failure also subsists corruption in all government institutions. Corruption is not only a standalone problem. The concept of economic corruption is very vast and border. In the border term, corruption imposes an additional cost on investors and increases uncertainty regarding future expenses, production costs, and revenue.

Corruption works like a greasing wheel for administrators, which encourages an extra proficient endowment of government facilities and delivers litheness for businesspeople to sidestep unproductive rules.[4] From this perception, corruption does work as a positive indicator of economic growth. On the other hand, corruption act like a sanding wheel by distorting the activities of the investors as import quotas and licenses from the government, whereas demand for these government-supplied goods is so high and inelastic; hence this cause creates a fertile ground for corruption. Moreover, the established producers and the innovators have limited resources and constraint credit.[5] Corruption is responsible for the disruption of a country, and poor governance affects the economy's destruction. Governing institutions and corruption create conflictual situations in the economy. These conflicts are complex and interrelated to each other. They exist in reality in many developing countries.[6] Good governance is consider an essential element in the development process. The idea of good governance is not the earliest. Leftwich (1993) described the concept of good governance.[7] This idea was introduce due to the absence of aid effectiveness, rule and law, lack of accountability, misallocation of resources, and many others. Governance is a

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set of rules, political laws rule by contributing to civil society at the national and international level.[8,9]

Good governance transports fair tax system state legitimacy, taxpayers' willingness to pay tax, and influence of tax administration main pillars for the sound tax system. Everest-Phillips and Sandall (2008) postulated the connection between governance and tax reforms.[10] There are three dynamics governance, taxation, and investment climate for growth. Better governance enterprises and an adequate, friendly investment tax system substitute economic growth. From the above, it is common to find people referring to corruption as the perversion of public affairs for private gain. Therefore, corruption includes bribery or using illegal rewards to influence people in positions of authority. It also uses public funds and resources for private gain. It also postulates a connection between corruption, poor governance, and the size of tax evasion; thus, corruption could cause less revenue. Moreover, a high level of corruption in society is usually linked with an overall low level of obedience and laws. Every national and international funding measure is dangerous because it undermines the state and helps the wrong leaders to get elected to prevent societies from confronting urgent problems. Therefore, the main objective of this study is to identify and investigate the effect of corruption on the government, reduce corruption, and generate revenue through good governance.

LITERATURE REVIEW

There is an increasing trend in Economics literature to analyze the association between corruption, governance, and government revenue. Thach (2017) scrutinized the impact of corruption on economic growth.[11] The study captures data from eighteen Asian countries from 2004 to 2015. Dynamic GMM and quartile regression techniques are applied for estimation to check the connection between corruption and growth. The results indicate that corruption is the main obstacle to minimizing economic growth. The results also show that strong institutions are essential to economic growth. Al Mamun (2017) examined the quality of governance on economic growth. Governance has an essential part of societies to increase economic growth.[12] The study uses data from 19 countries to determine the quality of governance on economic growth. The period of this study is 1980-2012. The robustness test and the Common correlation effect pooled method (CCEP) are applied to estimate short-run and long-run tests. The results indicate that the quality of governance plays a significant role in boosting economic growth both in the short and long run. The findings also show a strong governance effect in countries with higher information technology, higher social capital, economic globalization, and higher financial development.

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Ahmed and Sial (2016) examined the association between tax revenue and economic growth in Pakistan's economy using data from 1974-2010.[13] The study scrutinizes the long-run and short-run correlation between revenue and economic growth. Auto Regressive Distributed Lag (ARDL) technique is applied for analysis. The findings indicate that tax revenue and economic growth have a significant and negative effect on economic growth in the long run. It is also found that the burden of indirect taxes is very high compared to direct taxes. The result concludes that Governments should introduce tax reforms to improve the tax system in Pakistan and increase economic growth. Shakib (2016) examined the association between corruption and foreign direct investment.[14] The study captures data from forty-eight countries from 1998 to 2014 to describe the connection between foreign direct investment and corruption. The feasible general least squares method (FGLS) and panel-corrected standard errors are applied to conclude the association between foreign direct investment and corruption using the random effect model. Consequences indicate that corruption is a core variable and has a negative and significant impact on foreign direct investment.

Syadullah and Sciences (2015) examined effective governance and tax revenue in Asian countries.[15] Many several factors influence tax revenue. The main focus of this study is to investigate the effect of governance in the case of ASEAN countries by using variables like political stability, Government effectiveness and quality of regulations, Law enforcement accountability, and control of corruption. Descriptive analysis and causality methods are applied. It is found that rule of law and quality of regulatory variables have a positive impact. In contrast, the control of corruption, voice and accountability, and political stability significantly and negatively affect tax revenue. Phuong (2015) significantly examined the impact of institutional quality (Governance indicator) on tax revenue in developing countries.[16] The study captures the data from 82 developing countries from 1996 to 2013. The generalized Method of Moments (GMM) technique is used. The results indicate a positive impact of institution quality on tax revenue in the middle-income group.

Ajaz and Ahmad (2010) examined the impact of corruption and governance on tax revenue.[17] The study conducts data from twenty-five developing countries from 1990 to 2005. The correlation between governance and corruption is evaluated using the generalized least square (GLS) technique. The results indicate that corruption negatively affects governance and positively impacts tax revenue. Thornton (2008) examined the correlation between corruption and tax revenue in African and Middle East economies.[18] The study has a primary focus on the total revenue. The study captures 53 African and Middle East countries worldwide and the period from 1984-2001. The relationship between corruption and tax revenue is evaluated using the ordinary least square (OLS) technique and two stages least square (2LS). The findings show that corruption has a significant and adverse effect on revenue.

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Theoretical Consideration

Corruption is a universal phenomenon in human civilization through periods and space, which can be drawn back to pre-biblical times.[19] Corruption occurs in developed and developing countries, but the corruption mechanism is most common in developing countries. Rohwer (2009) postulated that corruption mainly occurs among two values, large (grand) value and low (petty) value.[20] The low weight is related to the mid and low levels of government work like schools, hospitals, police offices, and government departments. While considerable value is conducted to the high level of corrupt transactions, change policies, and expenses, the public goods look like political corruption. Lui (1985) developed an equilibrium queuing model of bribery in the 1980s.[21]It presents the bureaucratic corruption which moves to the suitable and well-organized firm via giving contracts to those offering the enormous bribe. Corruption also has a significant and positive impact on the public sector. It is suggested that two types of instruments lead to an increase the economic growth through corruption. First, corruption, such as bribery, enable the firm to control the bureaucratic delay. Second, this practice would make the government employees work hard to charge the bribe where bribery act as a price rate. While the first instrument shows that corruption would benefit those countries where bureaucratic rules are complicated, the second instrument manages the level of red tape.[22,23]

Fundamentally, three phases of the evolution of corruption can be recognized. In the first phase, corruption is substantial and does not severely affect economic growth. This phase shows that corruption occurs initially in more significant business and upper government circles. However, it does not drastically hamper legislative work and mostly happens beneath the surface.[24] The second phase of corruption is recognized by a degree that has become immanent and penetrates everyday life. Rules and regulations are violated, and black markets embellish habitually. Corruption becomes a complicated public issue and infuses fundamentally in public interactions. The third phase of corruption harms society and affects other factors such as economic freedom, government size, income distribution, and inflation; however, corruption sands the wheel of economic growth.[25] Besides this, governance is an integral part of societies. Its role in civilization concerns values, ethics, and the rule of conduct and justice. The decision for the organizing societies who should hold power and authority is run under good governance. For a long time, governance has become an exciting subject of debate for philosophers like Kautilya, Aristotle, Rousseau, Adam Smith, and Karl Marks.

Governance is a multidimensional phenomenon. Worldwide governance is depicted concerning the state and society. Governance consists of two keys that overlap with each other. First, based on all aspects like organizations, strategies, regulation, manners, laws, and overnight instruments, the second key is a standard and ideological setting for governance that is perceived and shaped

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by values, culture, traditions, and ideology.[26] The Bloom, et al. (2004) survey of Asian countries pointed out the main theories of governance relating to economic enlargement that recommends prosperous society own some features in terms of good governance in economic development.[27] Three components broadly define competitiveness (a prosperous nation is competitive), resilient institutions, and social capital. The second school of thought (cautionary school of governance for growth) elaborates association between governance and economic development.[28] It is proven that good governance plays a vital role in developing a country that reduces corruption rather than poor governance. The third school of thought, concerning North, et al. (2009), is the most creative, intense, and exciting theory. North focused on three main aspects.[29]

DATA AND METHODOLOGY

The prime objective of this study is to analyze the impact of corruption and governance on government expenditure by using panel data from ninety-six countries from 2005 to 2015. The data on corruption and governance are obtained from Corruption Perception Index annually (CPI 2005-2020) and the World Governance Indicator (WGI 2020), respectively, while the data on government expenditure is obtained from the World Development Indicator (WDI 2020). This study also used other explanatory variables like population, Government general final consumption expenditure, Gross domestic product, and foreign direct investment. The OLS, fixed effect and Driscoll and Kraay (D&K) techniques are applied. Some assumptions express the fixed effect approach as the slope coefficient remains the same, the different countries change the intercept term, and each country has a specific intercept. Equation (1) represents the fixed effect model.

$$M_{it} = \beta_{0_i} + \beta_1 N_{1_{it}} + \beta_2 N_{2_{it}} + \beta_3 N_{3_{it}} + \mu_{it} \quad (1)$$

The subscript *i* shows that each country has its intercept and may or may not change across the countries. The intercept of each country does not vary across entities, which is time-invariant. Select whether a fixed effect model is suitable or a random effect model. Hausman test is applied. The Hausman test is used to check the more efficient model compared to the less efficient model. If p values are significant (less than 1%, 5%, 10 %.), then the fixed effect approach is appropriate for estimation. If the p-value is significant, then the random effect approach is suitable for estimation. Driscoll, (1998) method is use for the covariance matrix estimator, which produces heteroscedasticity consistent with standard error.[30] Robust standard errors are described by White (1980)[31] to develop alternative covariance matrix estimators. Covariance matrix estimators can be

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defined as robust, general cross-sectional forms. When these estimators are applied for statistical inference, the results are efficient in the presence of heteroscedasticity. Driscoll and Kraay's approach removes the deficiency of other large consistent covariance matrix estimators.[32] Heteroscedasticity and autocorrelation consistent covariance matrix estimator has equaled through Driscoll and Kraay covariance estimator. The standard error is robust to heteroscedasticity serial correlation and spatial correlation. Nevertheless, there, a weak dependency on the time dimension is required.[33]

EMPIRICAL RESULTS

The econometric version of the Government Revenue and Corruption model is as follows.

$$LnREV_{it} = \alpha_0 + \alpha_1 LnCOR_{it} + \alpha_2 LnPOT_{it} + \alpha_3 LnEXP_{it} + \alpha_4 LnFDI_{it} + \mu_{it} \quad (2)$$

This model evaluates the relationship between revenue, corruption, population, expenditure, and foreign direct investment. The results are given in Table 1.

Table 1
Government Revenue and corruption

$$LnREV_{it} = \alpha_0 + \alpha_1 LnCOR_{it} + \alpha_2 LnPOT_{it} + \alpha_3 LnEXP_{it} + \alpha_4 LnFDI_{it} + \mu_{it}$$

Variables	OLS	FE	D&K
	0.000*	0.524	0.000*
LnCOR$_{it}$	-(0.1801)	-(0.0306)	-(0.1801)
	0.000*	0.970	0.000*
LnPOT$_{it}$	(0.1966)	(0.0021)	(0.1966)
	0.000*	0.207	0.000*
LnEXP$_{it}$	(0.7473)	(0.0683)	(0.7473)
	0.127	0.714	0.000*
LnFDI$_{it}$	(0.0111)	-(0.0029)	(0.0111)
	0.000*	0.004*	0.000*
Constant	-(2.0576)	(1.9432)	-(2.0576)
Diagnostic Tests			
Auto	**Hetro**	**Ramsay**	**Hausman**
0.0293	0.000*	0.000*	0.000*

Source: Author's Calculation. Note: *,**,*** show significance level at 1%,5% and 10% respectively.

The analysis is carried out through pooled OLS, Fixed Effects, and Drisc and Kraay models. The relation between revenue, corruption, total population, expenditure, and foreign direct investment is evaluated. In the D&K model and OLS, corruption, population, and expenditure are significant at 1% significance, whereas FDI is insignificant in OLS & FE model and significant in the D&K model. The coefficient sign indicates that a 1% increase in corruption decreases revenue by 18% in D&K and OLS estimations. This finding is consistent with the previous result provided by Ajaz

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and Ahmad (2010)[34], Imam, Jacobs et al. (2014)[35] and Hwang (2002).[36] The coefficient sign of the population variable shows that a 1% increase in total population increased revenue by 19% in D&K and OLS estimations. The expenditure has a positive impact on revenue in all estimations. FDI positively impacts revenue in D&K & OLS estimations, whereas it is negative in fixed effect estimation. The results of the D&K model are more consistent and efficient.

Various diagnostic tests are used to determine the model's appropriateness. The outcome supports how Auto and Hetero are presented in the model. The Hausman test result suggests that the fixed effect model is being used. The Ramsey test explains the absence of an important variable. Table 1 presents the findings.

The econometrics version of the Government Revenue and Governance model is as follows.

$$LnREV_{it} = \beta_0 + \beta_1 LnGVE_{it} + \beta_2 LnGDG_{it} + \beta_3 LnEXP_{it} + \beta_4 FDI_{it} + \mu_{it} \quad (3)$$

The relationship between revenue, governance, gross domestic product, expenditure, and foreign direct investment is estimated in this model. The results are given in the following Table 2.

Table 2
Government Revenue and Governance

$$LnREV_{it} = \beta_0 + \beta_1 LnGVE_{it} + \beta_2 LnGDG_{it} + \beta_3 LnEXP_{it} + \beta_4 FDI_{it} + \mu_{it}$$

Variables	OLS	FE	D&K
LnGVE$_{it}$	0.000* (0.1732)	0.044 -(0.2800)	0.000* (0.1732)
LnGDG$_{it}$	0.000* (0.3187)	0.874 -(.0018)	0.000* (0.3187)
LnEXP$_{it}$	0.805 -(0.0611)	0.212 (0.0936)	0.630 -(0.0611)
LnFDI$_{it}$	0.005* (0.0362)	0.736 -(0.0034)	0.000* (0.0362)
Constant	0.083** -(1.7675)	0.736 -(0.0034)	0.001* -(1.7675)
Diagnostic Tests:			
Autocorrelation	**Heteroscedasticity**	**Ramsay**	**Hausman**
0.004*	0.000*	0.000*	0.000*

Source: Author's Calculation. Note: *,**,*** show significance level at 1%,5% and 10% respectively.

The analysis is carried out through pooled OLS, Fixed Effect, and Drisc and Kraay (D&K) model. The relationship between government revenue, Governance, Gross domestic product, expenditure, and foreign direct investment is evaluated. In OLS and D&K Models, Governance is significant at 1%. The coefficient sign of both models is positive, showing that a 1% increase in governance increase revenue by 0.17%. Existing findings are related to Ajaz and Ahmad (2010). In OLS and D & K models, the Gross domestic product is significant at 1%. At the same time, the coefficient sign of the OLS and D&K model is also positive, which shows that a 1% increase in the Gross

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domestic product increases the revenue by 0.31%. In OLS and D&K estimation, expenditure is insignificant, and the sign of the coefficient in OLS and D&K estimation is also negative, showing that a 1% increase in expenditure decrease revenue by 0.06%. FDI is significant in OLS and D&K estimation at 1%. The coefficient sign is positive, showing that a 1% increase in FDI increases revenue by 0.03%. In the Fixed effect model, all variables are insignificant. Different diagnostics tests like auto and hetero are applied. The results of the D&K model are more consistent and efficient.

Several diagnostic tests have confirmed the presence of Auto and Hetero in the model. The outcome of the Hausman test points to the employment of the fixed effect model. The Ramsey test explains the absence of a crucial variable. The results are shown in Table 2.

CONCLUSION AND POLICY IMPLICATIONS

This study analyses the association between corruption, governance, and Government revenue in the context of developed and developing countries by using panel data from ninety-six countries from 2005 to 2020. Panel data techniques like fixed effect, random effect, and D&K were used to analyze the data. The essential findings of the study are as follows.

In model 1, the relationship between corruption and government revenue is evaluated. Corruption is significantly negative with government revenue in the D&K model, which shows that with the increase in corruption, government revenue will fall. All three control variables, population, expenditure, and foreign direct investment are significant in the D&K model. The coefficient signs of these variables are positive, showing that these will increase government revenue. In model 2, the relationship between governance and government revenue is evaluated. The core variable Governance is significant in the D&K model, and the coefficient sign is positive, showing that government revenue will also increase with an increase in governance. Three control variables, population, expenditure, and foreign direct investment are significant in the D&K model. The coefficient sign of expenditure and foreign direct investment are positive, which shows that revenue will also increase.

Corruption becomes the root cause of lowering revenue. Therefore, the government should try to minimize the level of corruption in the economy. Governance plays a significant role in the economy. As governance improves, government revenue also increases. Government should focus on improving the governance quality in the economy. This step also reduces corruption and further generates the economy's revenue. Foreign direct investment (FDI) has a multidimensional impact on the economy. So, the government should focus on these policies which attract FDI. The governments of developing economies should focus on controlling public expenditures. As it is found in the study, expenditures negatively affect revenue.

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