



Rent Seeking Policy, Institutions and Corruption in Specific Countries of the World

Tariq Hussain¹, Khizra Rana²

Abstract

Rent seeking policies generate wealth without increasing the real income of a country. These policies are closely linked with the performance of institutions. In the presences of low performing institutions rent seeking policies and corruption only flourish. This phenomenon is common in developing countries. In order to evaluate the association between rent seeking policy, institution and corruption, Panel data technique is applied in the study. The time span of the study is 2001-2020. Rent seeking policies might lower the performance of institutions and this further increase corruption.

Keywords: Rent Seeking Policies, Corruption, Panel Data, Institutions

1. Introduction

Rent seeking policy is generally used as a tool of economic variable in any economy. Rent seeking policy is a hurdle for the improvement of social welfare. It sluggish down the performance of institutions. The role of rent seeking policies is different in developed and developing countries. Katz et al (1989) elaborated that the developed countries having the well-known hierarchies as compare to developing countries. Established hierarchies are caused to less wasteful in developed countries. These countries are generally silent demanding to discover their political and social character by shifts in the comparative power of force groups. The rent-seeking spectacle denotes the efforts of certain interest groups to obtain private privileged benefits from the government (Adit, 2016 and Tollison, 2012).

Hillman et al. (2015) analyzed that the rent-seeker's behavior, a rent is an unearned reward required through a search for opportunity. The quest for rent is personally beneficial but social loss is also part of this strategy because resources are used in nonproductive channels. Rents are quest in different situations but in order to analyze for economic interest rents are frequently derived from public policy.

Rent seeking policies are closely correlated with property rights. Unprotected property rights are main hurdles of developing economies; it is directly or indirectly affected both classes of countries except to several level. It is positively correct rent seeking is all over the place but its effects are more in developing countries as compare to advanced countries. Several political reforms might improve the property rights which will reduce the rent seeker behavior (Tullock, 1993).

In developing countries, there exists inappropriate role of economic variables as, low living standard, unequal distribution of income, low per capita income, poor health, low level of output and high population. These variables are responsible for creating rent seeking policies (Khan and Jomo, 2000).

Tullock (1967) and Krueger (1974) elaborated that rent-seeking occurrence signifies the attempts of definite interest groups to gain private advantaged assistances from the government. Rent seeking policies are generally flourished in developing economies as the institutions in these economies are not functioning well. Institutions play the major role by improving the performance of society. Inefficient institutions are caused to increase the rent seeking policies. Institutions, political and economic are directly or indirectly affected by the rent seeking policies. Many political parties are adopted lobbying situation and earn income by rent seeking.

Institutions and rent seeking policies are closely correlated to each other. Institutions are responsible of rent seeking policies. At other side with the existence of rent seeking policies the performance of institutions tends to be low. By the low performance of institutions rent seeking policies are taken place.

In the same way, institutions and corruption are closely correlated to each other. Aidt (2016) contemplates that corruption has two central constituents: the helping hand kind of corruption. It looks as the authority to decide, is transmitted to a cluster of nasty or ailing arranged group of people, and the grabbing hand form of corruption, which instigates from political leaders favorable incompetent policies and actions for their own benefits.

A common indulgent regarding corruption is that corruption damages economic progress (Coolidge and Rose-Ackerman, 1997). Nevertheless, it is also found in different studies that corruption stimulates economic evolution too. Once bureaucrats are unresponsive to business. Corruption can toil alike piece-rate emolument for bureaucrats that encourages a more competent facility of government facilities, and it offers a liberty for businesspersons to evade incompetent protocols (Leff, 1964; Ali).

Institutions determined the level of corruption because in those countries where institutions are working properly there level of corruption tends to be low. In advanced countries, institutions have strong frame work, as results high per capita of income, low rate of inflation, low unemployment and minimum level of corruption are prevailed in these countries. While in developing countries, institutional performances are low and cause to low gross domestic product (GDP), Incremental unemployment and corruption. The corruption sensation has been, henceforth, reflected an exhibition of rent seeking actions (Ali, 2022; Capasso and Santoro 2018; Krueger, 1974). Corruption weakens the mental and physical approach and capabilities of the citizens.

¹Associate Professor, Grand Asian University (GAUS), Sialkot, Pakistan, htariq066@gmail.com

²PhD Scholar, NCBA&E, Lahore, Pakistan

The relationship between rent seeking policy, institution and corruption is complex. Rent seeking policies are the responsible to sluggish down the performances of institutions and create the conducive environment for corruption. In third World countries, the economic activities are not performed in efficient way due to uncertain property rights. People quest the rent by unfair means as theft, bribery and illegal way.

Global Corruption Barometer (TI, 2013) shows Pakistan to be a country which suffers due to bribery at all levels. 81% of respondents surveyed consider public officials and civil servants to be extremely corrupt. 57% reported that they have paid a bribe to obtain a service. Majority of all those surveyed consider government efforts to deal with corruption as ineffective and corruption to increase within the coming years.

The following are the hypotheses of the study

1.1. Hypotheses

- (i) Ho: Rent seeking has no significant effect on corruption.
- (ii) Ho: Institutions have no significant effect on corruption.

2. Literature Review

Rent-seeking handle how government constraints on economic movement yield to numerous shapes of rents, where organizations regularly compete for these (Tullock, 2003 and Rowley et al 2013). Rents are the rewards which distinct interest clusters gain because of government limitations to motivate certain activities (Tullock, 1967). Sometimes, competition for these rents is perfectly legal. Rent-seeking adopts different shapes, as corruption, rustling, and black markets (Krueger, 1974). Thus, the positive theory of rent-seeking is a natural extension of the theory of dynamic efficiency (Huerta, 2009 Espinosa, 2020; Senturk and Ali, 2022). It is estimated by the researchers of the World Bank that the cost of corruption in both developed and developing economies is 1000 billion\$ a calendar year (World Bank, 2004). Khan (2006) categorizes corruption into four categories: a) Neoclassical corruption b) State Officer corruption c) Political corruption and clientelism and d) Theft and original accretion. Corruption is a highly costly worldwide financial crime (Ali, 2022). Cost estimations amass to \$2.6 trillion per annum that denotes 5% of the global GDP (Graycar and Sidebottom 2012).

Tan (2015) examined that water privatization has the significant and negatively correlated with rent seeking policy. This study is association with cross sectional data of 50 countries, especially in Malaysia for time span 1995 to 2010. In Malaysia public sector as well as water privatization sector is not performing better. Central authority of Malaysia is focused on personal benefits in shape of rent seeking whereas social welfare is minimized. For this empirical analysis, GLS methodology is applied and data source National Water Services Commission is used.

Kegomoditswe and Adachi (2015) examined that the affiliation between Rent seeking, exchange rate and economic growth in Botswana. Granger casualty approach is employed for time series data. This study is used the time period over the 1994 to 2012. Results show that the rent seeking policy is significant correlated with economic growth. Government spending is used as the proxy for rent seeking has increasing impact on economic growth. Government spending as basic infrastructure construction of dams, roads, hospitals and financial institutions will be boost up the economic growth in Botswana. Therefore rent seeking policy has insignificant effects on exchange rate. Government expenditures in both time period as short and long run are not changed the level of exchange rate.

Ogunlana et al. (2016) analyzed that the impact of Government spending as proxy for rent seeking policy on corruption and output. There exists on significant relationship between rent seeking policy, output and corruption. This study contains time series data in Nigeria and methodology as Johansen Maximum Likelihood procedure and error correction mechanism over the time period 1980-2011. Results indicates that the Public investment as a percentage of GDP influences adversely output While rent seeking policy will cause to increase in corruption.

Eugene et al. (2016) analyzed long run and short run relationship among the public expenditure and economic development in Nigeria. There exists on significant correlation between public expenditure and economic growth. This study is employed error correction and Johansen co-integration techniques. Time series data is used for this study over the period 1986-2014. From Cobb Douglas production function, two types of components like capital formation ratio and public sector expenditure are derived. Result shows that the regular spending is the important tool of economic growth. Results indicate that the regular spending in long run has significantly negative relationship with economic growth but there is a optimistic impact of regular spending lying on economic growth. Krisanayuth (2017) analyzed the connection between rent seeking policy and income inequality in Thailand. Rent seeking policy has positively impact on income inequality. This study is employed the ordinary least square (OLS) regression technique for time series data. In this study the time span is used from 1995 to 2015. Results of this study shows that the rent seeking policy has the positively influence on income inequality. Public are used the resources for personal gain rather than social benefits; however this strategy provides the income inequality.

Audi and Ali (2017) analyzed the impacts of human, financial, political and economic determinants on corruption in developing countries. There are significantly inverse relationship between exports, GDP per capita, political stability and corruption. Positive relationship exists between imports, bureaucracy, human development index, democracy, rule of law and corruption. Fisher-ADF and Fisher-PP test are applied. In order to check the co-integration among the variables of model Pedroni-Residual based co-integration and FMOLS by Phillips and

Hansen (1990) test are applied. Short run relationship and speed of adjustment are tested by VECM. Panel data is used of 36 developing countries. This study is used the time span over 1995-2004. Results of this study indicate that exports, political stability and GDP per capita have the negative impacts on corruption. While human development index, imports, democracy, bureaucracy and rule of law are positively correlated with corruption. Exports will help to reduce the corruption. Political stability will be helpful to get rid the bribery in developing countries.

Whereas FDI establishes noteworthy proportions of whole investment in an economy, corruption has negative effect on FDI in the pragmatic studies done by (IMF, 2020), Abed and Davoodi (2000) and Lambsdorff (2003).

3. Theoretical Consideration

Rent seeking deeds have been pragmatic all over history, containing in primeval Rome, Medieval China, and throughout the Middle ages (Baumol, 1990). Rent-seeking is long-lasting and stubborn problem and the apparatuses by which it happened is elucidated by a large number of researchers (Buchanan & Tullock 1960; Tullock 2002; Tollison 1997; Olson 2000; Rowley 2000; Mbaku 2000 & 2008). Gramsc (2008) elaborated that neoclassical theory of rent seeking is focused on the government policy for creating the rents. Economic actors use the assets for search of rents. Such types of consumptions elaborate that the wastage of resources from the perspective of society.

In China, there are generally two terms are used for rent seeking a priori and a posteriori forms. The first denotes to numerous interest groups creating an intensive exertion and donating resources to stimulate the making of definite encouraging policies, whereas the other clusters getting benefit of loopholes in at present prevailing government strategies to look for rents (Sharpe, 2001)

Rent seeking policy is one of the main causes of a country for poor economic performances. Rent seeking is a skill to capture the income without productive contribution and producing output. Congleton et al (2008) elaborated that the chase for rents has always been ingredient of human deeds. People comprise lengthy fought and contended over wealth, rather than directing abilities and assets to productive activity. As results, Rent-seeking policy is caused to decline the performance of institutions such as income disparities, reduction in actual creation of money and misuses of resources. Posner (1975) explained that the rent seeking is always being a part of human behavior. The history of human life shows that nation contains wide-ranging fight and competed over assets, rather than directing abilities and assets to fruitful activity. The immense empires and conquests are the penalty of victorious rent seeking. Empires provide the resources which are consumed in order to defending the rents. The uncreative employ of capital to dispute, rather than create wealth, also occurred within societies in attempts to restore present rulers and in seeking the favor of rulers who dispensed rewards and certainly often determined life and death.

But the initiative of rent seeking is urbanized by Tullock in 1967. The term of rent seeking is coined by Anne Krueger in (1974). The term of rent is also known by the Adam Smith's concept of rent. This term refers to fast control of land and other ordinary possessions. Before 1967, rent has been a theme with strong concern among different classes of persons as economists, politicians and others. Terminology of rent is explained in different perspective as monopolist aim to secure the rent whereas Government is also exercised for gaining the rent by utilizing different channels. Monopoly generally allocates unfair ways of resources and creates the social evils. In goods and other markets, the concept of price mechanism is not working properly due to lack of inefficiency of economic, social and political factors. Sometimes monopolist force creates by Government, in order to grant monopolist's rights to specific groups. This situation is determined to increase the personal benefit and becomes the cause of social loss. Monopoly profit is not just include in rent but also refers to subsidies, transmit organized by political system, unlawful transfer by private mafias. In short term abnormal rents are gained by decreasing cost. Rents are classified into two categories as legal and illegal rents.

Schmoller (1903) explained rationality approach towards free market. Least cost combinations of factor of production grow the institutional qualities. In his theory of firm, considers the firm as social organization. Ayres (1944) focuses the theory of economic progress and industrial economy. Human skills and technological factors are the indicators of industrial progress. Capitalism system is criticized by Ayres, capitalism lay downs the moral values. Coase (1960) elaborated the interaction of neo-classical theory and transaction cost. Neo-classical theory of market, efficiency of market is obtained in that sense when transaction cost is zero. Costless transaction cost is prevailed with strong institutions and it postulates the economic growth.

Acemoglu *et al.* (2003) analyzed that growth policies have been effectively used in developed nations with strong institutions. The role of institutions becomes effectively when the roots of these are deeply and to play their role independently. Every person will to invest in those countries where there is supportable security and protection. Corruption is the use of assigned power for private gain (Thomas & Meagher 2004). Nye (1997) presents a diverse explanation of corruption as behavior which diverges from the official obligations of a public part owing to private gains. Corruption occurs in both developed and developing economies of the world. Besides this, corruption is routinely exported from rich to poor countries (Hawley, 2002; Bibi and Ali, 2021).

Mark (2005) elaborated that corruption has two historical aspects firstly cross temporal and cross literary phenomenon. It can take place under the Government of a country at any time. Second, in 20th century the study

of corruption has strictly paralleled concern in the democratizing and developing Nation. In 1950s and 1960s, the first wave of academic interest came by heels of decolonization along with at pinnacle of renovation theory. The second gesture during 1990 is recorded, are fueled through aggravation in many developing countries regarding the negative impacts of corruption. Aidt (2003) analyzed that corruption has the three main necessary conditions where public official must have the authority to design the policy and mandatory power must allow the extraction or formation of economic rent. Corruption is renowned by a degree, which has developed into penetrate into every day issue of life. Rules and convention are dishonored, black markets embellishment on ordinary way. Corruption becomes a problematical public concern and infuses primarily in public interaction.

4. Data Sources and Methodology

4.1. Data Sources

For this study, data is collected from different sources as World development Indicator (WDI), Freedom house and United Nations conference on trade and development (UNCTAD). This study is observed under technique of panel data. This analysis is carried out for 76 developed and developing countries. Methodology is defined as following.

4.2. Panel Data

A panel data (or longitudinal data) set exists on a time series for all cross-sectional component in the data set. Panel data can also be collected on geographical units. Panel data entail imitation of the identical units over time, panel data sets, particularly those resting on individuals, households and firms are extra complex to gain than pooled cross sections. (Wooldridge, 2004). Panel data provides more instructive data, extra variability, less co linearity between regressors, more degrees of freedom and extra competence. Panel data can healthier detect and compute effects that cannot be measured in pure cross-sectional or time series data. (Gujarati, 2012). The panel data method which has masses of reward is preferred more and more in both micro and macro level econometric studies (Davidson and MacKinnon, 1999).

4.2.1. Pooled OLS

The pooled OLS estimation is also recognized as constant coefficient model, for the assumption that coefficients across time and cross-section remain the same. The regression equation of the pooled OLS is as following.

$$Y_{it} = \alpha_{0i} + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \mu_{it}$$

Pooled OLS is simple approach but it provides the unbiased estimators. There is always heterogeneity in developing countries.

4.2.2. Fixed Effects Approach

Variable regression has major role because fixed effects approach can be obtained by this. Fixed effect approach is frequently used in economic and political science reflecting its status as the gold standard (Schurer & Yong, 2012).

Fixed effect approach is simple and has persuasive. Heterogeneity exists on panel data technique so to avoid the problem of heterogeneity bias, fixed effect approach is applied. In panel data, fixed effects regression is a process for controlling omitted variables, when the omitted variables differ across the entities (e.g. countries) but do not amend over time. If each entity has two or more time observations then fixed effects regression can be also used (Bartosova, 2009). The following equation is commonly used as fixed effect.

$$Y_{it} = \alpha_{0i} + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \mu_{it}$$

Where i indicates the intercept of each country, which may or may not be changed across countries.

4.2.3. Hausman Test

Hausman test is used in applied econometrics to check the validity of instruments. The Hausman test is essentially a test of whether the loss in efficiency is worth removing the bias and inconsistency of the OLS estimators. Hausman test also indicates that the coefficient estimates from pooled OLS estimation should be consistent. (Hoechle, 2007). The decision of fixed effect and random effect estimation is taken on the basis of the result of hausman's test. If p-value of the hausman test is significant then the fixed effect's technique for the estimation is applied. But in case of insignificance of the p-value of the hausman test, random effect approach will be applicable.

4.3. Diagnostic Tests

Different diagnostic tests which are the part of study explain as following.

4.3.1. Driscoll and Kraay

Driscoll and Kraay (1998) propose a nonparametric covariance matrix estimator which generates heteroscedasticity consistent standard errors that are robust to very general forms of spatial and temporal dependence. Driscoll and Kraay brief that the standard nonparametric time series covariance matrix estimator can be modified such that it is robust to very general forms of cross-sectional as well as temporal dependence. Driscoll and Kraay's approach eliminates the deficiencies of other large T consistent covariance matrix estimators (Hoechle, 2007). Driscoll and Kraay's covariance matrix estimator equals the heteroscedasticity and autocorrelation consistent covariance matrix estimator of Newey and West (1987) applied to the time series of cross-sectional averages. Driscoll and Kraay approach is based on the heteroskedasticity autocorrelation

covariance. The heteroskedasticity autocorrelation covariance, standard errors are robust to heteroskedasticity, serial correlation and spatial correlation but weak dependence in the time dimension is required.

4.3.2. Heteroskedasticity

Panel data typically contains some form of heteroskedasticity. Therefore, robust inference in the presence of heteroskedasticity and spatial dependence is an important problem in spatial data analysis. (Kim and Sun, 2011). For statistical inference in such models it is essential to use some covariance matrix estimators that can consistently estimate the covariance of the model parameters. (Strelec, 2013). Heteroskedasticity is that the variance of the error term is constant. (Homoskedasticity). If the error terms do not have constant variance, they are said to be heteroskedastic. The standard errors are biased when heteroskedasticity is present. This in turn leads to bias in test statistics and confidence intervals. (Richard Williams, 2015).

4.3.3. Autocorrelation

Autocorrelation refers to the correlation among the error terms (μ_{it}) of time series across observations.

Autocorrelation can arise for different reasons, such as inertia, specification error, Cobweb phenomenon, data manipulation, and nonstationarity (Gujarati, 1980). First degree autocorrelation refers to the current time period error term is linked up previous year error term. In order to the estimation of model, Lagrange-multiplier is used for serial correlation. Serial correlation is not found in null-hypothesis but alternative hypothesis refers to the existence of serial correlation.

4.3.4. Ramsey Test

Ramsey's RESET test is used in order to the global (rather than local) approximation to the mis-specified part of the conditional mean of the model. Ramsey's RESET test is designed to detect if there are any neglected nonlinearities in the model. (Tastan, 2015).

4.3.5. Multicollinearity

One of the assumptions of the classical linear regression model (CLRM) is that there is no exact linear relationship among the dependent and independent variables. If, there is one or more such relationships among the regressors, known as multicollinearity. It occurs when two or more predictors (combination of predictors) are highly (but not perfectly) correlated with each-other. If the variables are significantly alike, it becomes impossible to determine which of the variables accounts for variance in the dependent variable (Hawkings, 1983). Multicollinearity can be measured if t-tests for each of the individual slopes are non-significant ($P > 0.05$) but the overall F test for testing all of the slopes are simultaneously 0 is significant ($P < 0.05$). (Emenonye, 2012)

5. Empirical Results

This study describes the relationship between Rent seeking policy, institution and corruption. Panel data techniques pooled OLS, Fixed Effects (FE), and Driscoll-Kraay (D & K) is applied. The time span of the study is 2005-2020. Data is collected from World development Indicator (WDI), freedom house and United Nations conference on trade and development (UNCTAD). This study analyzes four models to interpret the relationship among Rent seeking policy, institution and corruption.

5.1. Empirical Findings

Model 1 Economic Institutions and Corruption

The econometric form of the model as following

$$\ln \text{COR}_{it} = \alpha_0 + \alpha_1 \ln \text{ELP}_{it} + \alpha_2 \ln \text{IMP}_{it} + \alpha_3 \ln \text{EXR}_{it} + \mu_{it}$$

The model evaluated the relationship between corruptions, economic legal property rights, and imports exchange rate. The results are given in following table.

Table 1: Corruption and Economic Institutions

Variables	OLS	FE	D & K
Logelp	(0.000)* 0.5904	(0.000)* 0.2233	(0.123) 0.2233
Logimp	(0.000)* 0.0039	(0.164) 0.0005	(0.022)* 0.0005
Logexr	(0.000)* -0.0057	(0.002)* 0.0004	(0.000)* 0.0004
Constant	(0.085)*** 0.3714	(0.000)* 2.8019	(0.006)* 2.8019
Auto.	RAMSEY	HETRO	HAUSMAN
(0.000)*	(0.005)*	(0.000)*	(0.000)*

Note: The values in parenthesis are P. values, *, ** and *** show the level of significance at 1%, 5% and 10% respectively.

This table is carried out the results of OLS, fixed effect and D & K models. The relationship between economic institutions, corruption, import and exchange rate is evaluated. The economic legal property rights are insignificant in D & K model, as the coefficient sign of economic legal property rights is positive. This shows that 1% increase in economic property rights brings 22 % increase in corruption. In their study, panel data technique is used, in

lower income countries; economic institutions have positive relation with corruption. However coefficient signs are positive of economic legal institutions in fixed effect and OLS models. Import is also significant in D & K model which shows 1% increase in import brings 59% corruption. This study indicates that imports have positive impact on corruption by non-linear effects. In Fixed Effect and D & K models exchange rate is significant while in OLS model exchange rate is also significant but coefficient sign is negative. In this work, lack of institutional qualities lead low output and market failure, so fix peg regime has positive impact on corruption while strong institutions will lead more output, market perfection and fix peg regime has inverse impact on corruption. Different diagnostic tests are applied. Hausman test's result show that fixed effect model is appropriate and fixed effect model is fit. Autocorrelation and hetroskedasticity are present in the model.

Model 2. Political Institutions and Corruption

The econometric form of the model as following

$$\ln \text{COR}_{it} = \beta_0 + \beta_1 \ln \text{POL}_{it} + \beta_2 \ln \text{GFC}_{it} + \beta_3 \ln \text{INC}_{it} + \mu_{it}$$

This model evaluated the relationship between corruption, political institutions, gross fixed capital and inflation. The results are given in following table.

Table 2: Corruption and Political Institutions

Variables	OLS	FE	D & K
Logpol	(0.000)* -0.4582	(0.000)* -0.1316	(0.035)* -0.1316
Loggfc	(0.000)* 0.755	(0.201) 0.145	(0.050)* 0.145
Loginc	(0.000)* -0.1409	(0.000)* -0.0344	(0.099)** -0.0344
Constant	(0.000)* 6.2684	(0.000)* 4.8193	(0.000)* 4.8193
Auto. (0.0000)*	RAMSEY (0.0000)*	HETRO (0.0000)*	HAUSMAN (0.0730)**

Note: The values in parenthesis are P. values, *, **and *** show the level of significance at 1%, 5% and 10% respectively.

Table 2 is carried out the results of OLS, fixed effect and D & K models. The relationship between political institutions, corruption, gross fixed capital and inflation rate is evaluated. The political institutions are significant in D & K model, as the coefficient sign of political institutions is negative. This shows that 1% increase in quality of political institution brings 13 % decrease in corruption. This result is accordance with the work of John Gerring and Strom C. Thacker (2004). In their study, panel data technique is used; political institutions have inverse relation with corruption. Therefore coefficient signs are negative of political institutions in fixed effect and OLS models. Gross fixed capital has positive sign and significant in D & K model which shows 1% increase in gross fixed capital brings 14% corruption. In Fixed Effect, OLS and D & K models inflation rate is significant and coefficients signs are negative. Panel data technique is used, their work shows in high income countries, inflation has inverse relation with corruption. Different diagnostic tests are applied. Hausman test's result show that fixed effect model is appropriate and fixed effect model is fit. Autocorrelation and hetroskedasticity are present in the model.

Model 3. Government expenditures, Political Institutions and Corruption

The econometric form of the model as following

$$\ln \text{COR}_{it} = \delta_0 + \delta_1 \ln \text{GEA}_{it} + \delta_2 \ln \text{POL}_{it} + \delta_3 \ln \text{TRD}_{it} + \mu_{it}$$

This model evaluated the relationship between corruption, Government expenditures, Political institutions and trade. The results are given in following table.

Table 3 is carried out the results of OLS, fixed effect and D & K models. The relationship between corruption, Government expenditures, political institutions and trade is evaluated. The Government expenditures are significant in D & K model, as the coefficient sign of Government expenditures is positive. This shows that 1% increase in government expenditures bring 1% increase in corruption. This result is accordance with the work of Paolo Mauro (1998). In this study, panel data technique is used of 100 countries, by this work government spending will be cause to increase corruption. Therefore coefficient signs are positive of government expenditures in fixed effect and OLS models. Political institutions are also significant in OLS, Fixed effect and D & K models however, the coefficient signs are negative which shows to increase in the quality of political institutions will be cause to decrease in corruption. Accordance to the work of Gerring and Thacker (2004). In Fixed Effect and D & K models trade is significant and coefficient signs are opposite. This work shows trade has inversely correlated with corruption in nonlinearity case. While in OLS model trade is insignificant which shows trade has no effect to the corruption. Different test are applied and results are derived in accordance to the standard. Hausman test's result show that fixed effect model is appropriate and fixed effect model is fit. Autocorrelation and hetroskedasticity are present in the model.

Table 3: Corruption, government expenditures and political institutions

Variables	OLS	FE	D & K
Loggea	(0.000)* 0.0029	(0.000)* 0.0013	(0.000)* 0.0013
Logpol	(0.000)* -0.4115	(0.007)* -0.0964	(0.060)** -0.0964
Logtrd	(0.310) -0.1409	(0.001)* -0.0056	(0.000)* -0.0056
Constant	(0.000)* 5.2590	(0.000)* 4.4596	(0.000)* 4.4596
Auto. (0.0000)*	RAMSEY (0.0000)*	HETRO (0.0000)*	HAUSMAN (0.0001)*

Note: The values in parenthesis are P. values, *, ** and *** show the level of significance at 1%, 5% and 10% respectively.

6. Conclusions and Policy Implications

6.1. Conclusion

The basic intention of the study is to investigate the association among rent-seeking policy (Government expenditure), institutions and corruption. Panel data, pooled OLS, Fixed Effects (FE), and Driscoll-Kraay (D & K) techniques are applied. This analysis is carried out for 76 developed and developing countries. Time span is 2005 to 2020. The main findings of this study are as following.

The first model is estimated through various econometric techniques with a number of control variables, the results indicates that the economic institutions have insignificant and positive relationship with corruption. This incremental change in economic institutions will not be cause to change the rank of corruption. Imports have significant and positive relation with corruption. This indicates progressive change in import will cause to increase in corruption. Exchange rate has significant and positive relation with corruption. This indicates that incremental change in exchange rate enhances the level of corruption. Model number two is assessed through various approaches of econometrics with a numerous independent variables. The results indicates that political institutions have the significant and inverse relationship with corruption. This incremental change in political institutions sluggish downs the level of corruption. This consequence is accordance with the work of John Gerring and Strom C. Thacker (2004). Whereas gross fixed capital has significant and positive impact on corruption. This progressive change in gross fixed capital will cause to increase the level of corruption. Inflation rate has significant and inverse impact on the corruption. This indicates that the progress change in inflation rate will diminish the level of corruption. In model three also different econometric estimation is applied. The results specifies that the Government expenditures have the positive and significant impact on corruption. This progressive change in Government expenditures will enhance the level of corruption. Political institutions have significant and inverse relation with corruption. This shows that by improvement the quality of political institution sluggish down the corruption. Trade has significant and inverse role with corruption. The incremental change in trade will cause to decrease the level of corruption.

6.2. Policy Implications

The following are policy implications of the study.

- There is dire need to improve the performance of economic institutions.
- It is desirable for the economies to control their imports, so that corruption is minimized.
- Role of political institution is robust. Economies accelerate the role of political institution and these institutions should be used to increase the performance of economic institutions.
- Investment should be focused by developing economies to increase GDP.
- Inflation should be controlled by the Government of both developed and developing economies.
- Corruption can be minimized by controlling the Government expenditures.
- The developing economies should control population.

References

- Abed, M. G. T., & Davoodi, M. H. R. (2000). *Corruption, structural reforms, and economic performance in the transition economies* (No. 0-132). International Monetary Fund.
- Aidt, T. S. (2003). Economic analysis of corruption: a survey. *The Economic Journal*, 113(491), F632-F652.
- Aidt, T. S. (2016). Rent seeking and the economics of corruption. *Constitutional Political Economy*, 27(2), 142-157.
- Ali, A. (2022). Determining Pakistan's Financial Dependency: The Role of Financial Globalization and Corruption. *Journal of Business and Economic Options*.
- Ali, A. (2022). Financial Liberalization, Institutional Quality and Economic Growth Nexus: Panel Analysis of African Countries. *Bulletin of Business and Economics*.

- Ali, A. (2022). Foreign Debt, Financial Stability, Exchange Rate Volatility and Economic Growth in South Asian Countries. *Journal of Business and Economic Options*.
- Audi, M., & Ali, A. (2017). Exploring the Linkage between Corruption and Economic Development in Case of Selected Developing and Developed Nations.
- Baumol, William J. (1990). Entrepreneurship: Productive, Unproductive, and Destructive, *Journal of Political Economy* 98 (5): 893–921
- Bibi, C., & Ali, A. (2021). Do Remittances Impact Human Development in Developing Countries? A Panel Analysis of Selected Countries. *Journal of Policy Research*, 7(2), 27-42.
- Buchanan, J & Tullock, G (1960). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*; Ann Arbor: University of Michigan Press
- Capasso, S., & Santoro, L. (2018). Active and passive corruption: Theory and evidence. *European Journal of Political Economy*, 52, 103-119.
- Congleton, R. D., Hillman, A. L., & Konrad, K. A. (Eds.). (2008). 40 years of research on rent seeking 2: Applications: Rent seeking in practice.
- Coolidge, J., & Rose-Ackerman, S. (1997). *High-level rent-seeking and corruption in African regimes: Theory and cases*(No. 1780). The World Bank.
- Davidson, R., & MacKinnon, J. G. (1999). The size distortion of bootstrap tests. *Econometric theory*, 15(3), 361-376.
- Espinosa, V.I. (2020). Epistemological problems of development economics. *Procesos Merc.*, 17, 55–93
- Government Failure: A Primer in Public Choice, Washington, D.C.: Cato Institute.
- Graycar, A. and A. Sidebottom (2012). Corruption and control: a corruption reduction approach. *Journal of Financial Crime*, 19(4), 384-399
- Gujarati, D. N. (2012). *Basic econometrics* 4th edn review.
- Hawking, R.R., Pendleton, O. J., (1983). The regression dilemma. *Commun. Stat. A-Theory*. 12, 497-527.
- Hawley, S (2002). Exporting corruption: Privatization, multinationals and bribery, People's Health Assembly – Issue Paper, Briefing 19, June
- Hillman, A., & Ursprung, H. (2015). Rent Seeking: The Idea, the Reality and the Ideological Resistance. *University of Pittsburgh*
- Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The stata journal*, 7(3), 281-312.
- Huerta de Soto, J. (2009) *The Theory of Dynamic Efficiency*; Routledge: London, UK; New York, NY, USA
- Iheanacho, E. (2016). The contribution of government expenditure on economic growth of Nigeria disaggregated approach. *International Journal of Economics and Management Sciences*, 5(5), 1-8.
- IMF. (2020, June). World Economic Outlook Update. Imf, (2), 6.
- Katz, E, and Jacob R. (1989). Rent-seeking for budgetary allocation: Preliminary results for 20 countries." *Public Choice* 60, 133-144.
- Khan, M. (2006). Determinants of corruption in developing countries: The limits of conventional economic analysis. *International Handbook on the Economics of Corruption*. 216–244.
- Khan, M. H., & Jomo, K. S. (Eds.). (2000). *Rents, rent-seeking and economic development: Theory and evidence in Asia*. Cambridge University Press.
- Kim, M. S., & Sun, Y. (2011). Spatial heteroskedasticity and autocorrelation consistent estimation of covariance matrix. *Journal of Econometrics*, 160(2), 349-371.
- Koitsiwe, K., & Adachi, T. (2015). Relationship between mining revenue, government consumption, exchange rate and economic growth in Botswana. *Contaduría y administración*, 60, 133-148.
- Krisanayuth, T. (2016). *Wealth, Inequality and Rent-Seeking*(Doctoral dissertation, Chulalongkorn University).
- Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American economic review*, 64(3), 291-303
- Krueger, A.O. (1974). The political economy of the rent-seeking society. *Econ. Rev*, 64, 291–303.
- Lambsdorff, J.G. (2003). How corruption affects productivity. *Kyklos*, 56(4), 457–474
- Leff, N. H. (1964). Economic development through bureaucratic corruption. *American behavioral scientist*, 8(3), 8-14.
- Mbaku, J M (2000). Governance, Wealth Creation, and Development in Africa: The Challenges and the Prospects, *African Studies Quarterly*, 4(2), 1.
- Mbaku, J M (2008), Corruption Clean-ups in Africa: Lessons from Public Choice Theory, *Journal of Asian and African Studies* 427
- Newey, W. K., & West, K. D. (1987). Hypothesis testing with efficient method of moment's estimation. *International Economic Review*, 777-787.
- Nye, J S (1997). Corruption and Political Development: A Cost-Benefit Analysis, *American Political Science Review* 51 pp. 417-29
- Ogunlana, O. F., Bakare, I. A. O., & Omobitan, O. A. (2016). Government Spending, Corruption and Output Growth in Nigeria. *Arabian Journal of Business and Management Review (Oman Chapter)*, 5(10), 55.

- Olson, M. (2000). *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*, New York: Basic Books.
- Posner, R. A. (1975). The social costs of monopoly and regulation. *Journal of political Economy*, 83(4), 807-827.
- Rose-Ackerman, S. (1999). When is Corruption Harmful? In A. Heidenheimer. & M. Johnston (Eds). *Political Corruption* (pp.307-338). New Brunswick: Transaction Publishers.
- Rowley, C K (2000). Political Culture and Economic Performance in Sub-Saharan Africa. *European Journal of Political Economy*, Volume 16
- Schmoller, G. (1903). *About the machine age in its connection with the people's prosperity and "the social constitution of the national economy*, Berlin: Springer
- Schurer, S., & Yong, J. (2012). Personality, well-being and the marginal utility of income: What can we learn from random coefficient models?
- Şenturk, İ., & Ali, A. (2022). The Relationship between Institutional Quality and Welfare: Panel-SUR Analysis on BRICS-T Countries. *Journal of Policy Research*, 8(1), 45-52.
- Sharpe, M. E (2001). Origins of Rent-Seeking Behavior in the Chinese Economy. *The Chinese Economy*, 34(2), 49-72
- Stankovičová, T. Ž. I. Spatial Aspects of Poverty in Slovakia.
- Tan, J. (2015). Water privatization, ethnicity and rent-seeking: preliminary evidence from Malaysia. *Journal of Southeast Asian Economies (JSEAE)*, 32(3), 297-318.
- Tastan, H. (2015). Testing for spectral granger causality. *Stata J* 1m,: 1157–1166
- Thomas, M A & Meagher, P (2004). A corruption primer: an overview of concepts in the corruption literature, Working Paper No. 04/03, IRIS, University of Maryland, USA, February 2004
- Tollison (1997). Rent Seeking', in D. Mueller (ed.), *Perspectives on Public Choice*, Cambridge University Press, Cambridge
- Tollison, R. D. (2012). The economic theory of rent seeking. *Public Choice*, 152, 73-82.
- Tollison, R.D. (2012). The economic theory of rent seeking. *Public Choice* 2012, 152, 73–82
- Tollison, R.D. Tullock, G. (2013). *The Political Economy of Rent-Seeking*; Kluwer Academic: Boston, MA, USA, 2013.
- Tullock, G (2002), *Theory of Public Choice*; in Tullock, G, Seldon, A & Gordon L. Brady, G L:
- Tullock, G. (1967). The welfare costs of tariffs, monopolies, and theft. *Economic inquiry*, 5(3), 224-232.
- Tullock, G. (2003). The origin rent-seeking concept. *International Journal of Business and Economics*, 2(1), 1.
- Tullock, Gordon (1993). *Rent Seeking*. The Shaftesbury Papers. Elgar Edward Elgar, Cheltenham UK
- United Nations Handbook on Anticorruption, Transparency International (2013) *Global Corruption Barometer*.
- Wooldridge, J. M. (2004). Statistical significance is okay, too: comment on "Size Matters". *The Journal of Socio-Economics*, 33(5), 577-579.
- World Bank, (2004). *Governance and Anticorruption (GAC)*, ongoing research, Washington: World Bank.