

GOVERNANCE PARADIGM: EXPLORING THE NEXUS BETWEEN CORRUPTION AND ECONOMIC GROWTH IN DEMOCRATIC AND NON-DEMOCRATIC COUNTRIES

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Abstract

Background: Developing nations need economic growth to improve living standards, reduce poverty, and achieve sustainable development. Corruption and military spending have many repercussions, but their cumulative effects, are less explored. This study examines how these factors affect economic growth in developing nations.

Purpose: This study explores the relationship between economic growth and key macroeconomic variables, including corruption, military expenditure, and social sector investments (health and education), in 50 developing countries.

Design/Methodology/Approach: Using a panel data framework, the study applies the Generalized Method of Moments (GMM) estimation technique to assess the impact of foreign direct investment (FDI), health expenditure, education expenditure, military expenditure, corruption, employment, and gross fixed capital formation (GFCF) on economic growth (GDP per capita).

Findings: The results indicate that FDI, health expenditure, education expenditure, employment, and capital formation significantly and positively influence economic growth. Conversely, military expenditure shows a negative effect on growth. Notably, corruption demonstrates a positive impact on economic growth, aligning with the "grease the wheels" hypothesis, suggesting that in contexts of weak institutions, corruption may enhance efficiency in certain economic activities.

Originality/Value: This study provides new insights into the complex role of corruption and military spending in the economic development of developing nations. The findings underscore the importance of balancing social sector investments and governance reforms to achieve sustainable growth.

Keywords: Economic growth, Corruption, Military expenditure, Health expenditure, Education expenditure, Foreign direct investment, Developing economies, Panel data analysis.

1. INTRODUCTION

Economic growth remains a critical objective for developing nations as they strive to enhance living standards, reduce poverty, and foster sustainable development. However, the factors influencing growth in these regions are multifaceted and complex. Among these, corruption, military expenditure, and investments in the social sector (health and education) stand out as significant determinants of economic performance. While corruption and military spending are often associated with adverse developmental impacts, their nuanced roles, particularly in contexts of weak governance, are not fully understood. Similarly, investments in the social sector are believed to drive growth, yet the extent of their influence remains underexplored in many developing economies.

Economic growth is a cornerstone for achieving higher living standards, poverty alleviation, and sustainable development in developing countries. However, the trajectory of growth in these nations is often impeded by structural and institutional challenges, including corruption, misallocation of resources, and an imbalance in expenditure priorities. While corruption and

military expenditure are commonly cited as detrimental to economic progress, their nuanced effects, particularly when juxtaposed with investments in the social sector, remain insufficiently explored. This interplay between governance quality, defense spending, and social sector investments has significant implications for the economic trajectories of developing economies (Jimenez and Jimenez,2007).

Corruption, often perceived as a barrier to development, has a complex relationship with economic growth. Traditional perspectives highlight its negative impacts, such as inefficiency and resource misallocation, described under the "sand in the wheels" hypothesis. Conversely, under the "grease the wheels" hypothesis, corruption can potentially expedite economic activities in contexts of weak institutions by bypassing bureaucratic inefficiencies. Similarly, military expenditure, typically viewed as a drain on productive resources, poses questions about its opportunity cost and long-term impact on economic growth. On the other hand, health and education investments are widely regarded as drivers of economic progress, fostering human capital development and enhancing productivity (Brempong ,2002).

The effects of corruption on extended economic growth and the measure of political freedom were examined by (Mendez & Sepulveda, 2005). From the time period 1996-2003, panel data of 100 countries is used. Fixed Effect (FE) econometric technique was used to estimate the results by using the variables corruption, institute of management development, investment, population growth, GDP, International Country Risk Guide, education (secondary school enrollment) and political regimes. Directly or indirectly corruption decreased economic growth by reduced investment in physical capital determined by the study. Corruption harms poor people more than the rich people in African republics. The empirical evidence showed that corruption is positively correlated by income inequality and negatively correlated with economic activity. Corruption had negative and significant effect on economic growth has been explored by study. Corruption decreased economic growth and was positively correlated with income inequality explored by the study. It has been suggested that the institutional reforms can bring the economic growth (Lambsdroff,2003).

Corruption, Efficiency, Productivity variables were employed in an empirical research. The empirical analysis findings of the study explored that, there was significant negative relationship exist between the corruption and productivity. Less proficient economies, though, could increase their productivity by refining their relative competence. It has been recommended that the institutional integrity is important to improve the competitiveness and persistent growth. Further, it was suggested that for reduced corruption and increased economic growth good governance is required (Swaleeheen, 2009).

examined the effects of corruption on economic growth. Study used the panel type data of 126 economies covered time period from 2008-2012 has been used. The econometric technique Ordinary Least Square (OLS) was adopted to analyze the results by using the variables Corruption Perception Index, Global Peace Index, Trade, Inflation, Per capita income and Economic growth. The control macro indicators used in the study were labor, financial crisis and FDI has significant impact on the economic growth. Findings of the empirical result suggested that corruption had negative affects on the per capita economic growth and Foreign Direct Investment (FDI) had positive relation with economic growth whereas, the labor and financial crisis are negatively

related with economic growth. Peace was positively related with economic growth. Confidential activities also encouraged corruption. Further, it was also suggested that the good governance can decrease the level of corruption and can provide the peaceful environment and boost the economic growth. Peace was also the most important factor to enhance the economic growth of the country. The effect of corruption on economic growth has studied by (Agostino et al., 2016). The research study has taken the panel data of 48 African economies covered the time span dated from 1996 to 2010. The econometric technique System Generalized Method of Moments (GMM) was employed to use for the sake of estimation of results by using the variables corruption and economic freedom. The findings suggested that there was negative relationship between GDP and share of military spending, investment and government spending were positively related, corruption and government spending are negatively related whereas , corruption and military spending were positively related(Deyshappriya ,2015).

This study examines these critical relationships in the context of 50 developing countries using a robust panel data framework and the Generalized Method of Moments (GMM) estimation technique. By analyzing key variables such as foreign direct investment (FDI), employment rates, gross fixed capital formation (GFCF), health and education expenditures, military spending, and corruption levels, the research aims to provide a comprehensive understanding of their collective and individual impacts on economic growth.

This research contributes to the growing body of literature by offering empirical insights into the interdependencies between corruption, military spending, and social investments in developing economies. It underscores the necessity of governance reforms and strategic prioritization of health and education sectors to foster inclusive and sustainable development. By addressing these critical issues, the study aims to guide policymakers in formulating effective strategies to enhance economic growth while tackling the underlying institutional and structural challenges in developing nations.

The findings offer valuable insights into the dynamics of economic growth in developing economies, emphasizing the importance of balanced governance reforms and targeted social investments. This study contributes to the ongoing discourse on sustainable development by presenting empirical evidence on the trade-offs and synergies between governance quality, sectoral expenditures, and growth outcomes.

2. LITRRATURE REVIEW

The corruption showed the beneficial effect in the various ways as it can increase the national income of the countries at the various phases of the economic expansion revealed by Graeff and Mehlkop (2003). The same justification was given by the Matthew and Idowu (2013) claimed that the corruption has been positively associated with the economic growth of Asian countries. According to Spyromitros & Panagiotidis' (2022) research, the influence of corruption on economic growth varies by area, with Latin American and Caribbean countries showing a positive correlation. This aligns with the "Grease the Wheels" idea, which suggests that corruption may be used to overcome sluggish bureaucratic institutions in specific situations.

However, in places such as the Middle East and North Africa (MENA), corruption has a mostly negative impact, validating the "Sand in the Wheels" concept. These geographical variances highlight how the institutional and governance context influences the impact of corruption on economic growth. Econometric Model Specification

According to Spyromitros & Panagiotidis' (2022) research foreign direct investment (FDI), and human capital development (such as education levels), may assist alleviate the detrimental effects

of corruption on growth. The study discovered that higher levels of investment and secondary education tend to boost GDP per capita and counteract the negative impacts of corruption. According to Spyromitros & Panagiotidis' (2022) research compares CPI, CCI, and ICRG data from 2012 to 2018. The findings suggest that while all three indicators connect with poor growth outcomes owing to corruption, the CPI has larger statistical significance. According to Spyromitros & Panagiotidis' (2022) research shows that governance quality plays a crucial role in mitigating the impact of corruption on growth. In nations with poorer governance frameworks, corruption tends to have a greater deleterious influence, whereas in stronger governance conditions, the negative repercussions of corruption may be less severe. According to Spyromitros & Panagiotidis' (2022) research introduces the idea of a threshold effect, where corruption's impact on growth is context-dependent and can change at different levels of governance and institutional strength. At low levels of governance, corruption can stimulate economic activity by cutting through bureaucratic red tape (the "grease the wheels" effect), but beyond a certain threshold, corruption becomes more harmful (the "sand in the wheels" effect). According to Spyromitros & Panagiotidis' (2022) suggests that while corruption may negatively influence growth in the near term, it may be remedied in the long run with institutional changes and investment.

Jimenez and Jimenez (2007) attempted to study the corruption effects on economic growth results of 22 OECD economies from production perspective. Study covered the time period from 1980 to 2000. Researcher adopted the Data Envelopment Analysis (DEA) (non-parametric technique) to evaluate the production frontier and linked levels of efficiency. Corruption, Efficiency, Productivity variables were employed in an empirical research. The empirical analysis findings of the study explored that, there was significant negative relationship exist between the corruption and productivity. Less proficient economies, though, could increase their productivity by refining their relative competence. It has been recommended that the institutional integrity is important to improve the competitiveness and persistent growth. Further, it was suggested that for reduced corruption and increased economic growth good governance is required.

Swaleeheen (2009) examined the relationship concerning corruption and economic growth. The research study taken the panel data of 117 states covered the time period from 1984 to 2007. The econometric technique GMM was employed in the research. The result of the study from the econometric technique employed as corruption has opposing impact on the economic growth and at income per capita. Corruption has direct influence on the economic growth and the indirect effects on the investment and other channels.

Johnson et al. (2010) studied the relationship concerning the corruption and economic growth. The study used data form time series data used the United States economy covered the time period from 1970-2000. The econometric technique Ordinary Least Square (OLS) was used in the study to observe the results of relation between corruption and economic growth. The results showed that higher corruption reduced the investments as well as the economic growth. Corruption results from political instability and institutional inefficiency.

Deyshappriya (2015) examined the effects of corruption on economic growth. Study used the panel type data of 126 economies covered time period from 2008-2012 has been used. The econometric technique Ordinary Least Square (OLS) was adopted to analyze the results by using the variables Corruption Perception Index, Global Peace Index, Trade, Inflation, Per capita income and Economic growth. The control macro indicators used in the study were labor, financial crisis and FDI has significant impact on the economic growth. Findings of the empirical result suggested that corruption had negative effects on the per capita economic growth and Foreign Direct

Investment (FDI) had positive relation with economic growth whereas, the labor and financial crisis are negatively related with economic growth. Peace was positively related with economic growth. Confidential activities also encouraged corruption. Further, it was also suggested that the good governance can decrease the level of corruption and can provide the peaceful environment and boost the economic growth. Peace was also the most important factor to enhance the economic growth of the country.

3. THEORETICAL APPROACH

According to various theoretic as well as literature backgrounds corruption effects the economic growth in the two ways which referred the term as hypothesis, which are as (i) Sand in the Wheels Hypothesis (ii) Grease in the Wheels Hypothesis (Meon and Weill, 2009; Saha and Ali, 2017).

a. Sand in the Wheels Hypothesis

Li et al. (2000) argued that corruption minimizes the investment plus lessens the economic growth. Likewise, Wei (2000) determined that corruption reduces the FDI (Foreign Direct Investment) and slows down the capital inflows into the countries which cause more the rent seeking activities due to the increasing corruption that ultimately decelerates the economic growth. Similarly, G.d'Agostino (2016) investigated the behavior of corruption which incurs the economic growth in the case of developing economies.

Dimova (2010) & Ugur (2014) stressed, corruption has damaging result on the growth of the republics. Similarly, Mo (2001) has explored that the reduced corruption has the positive as well as significant effect on the GDP/capita besides argued that large amount of government spending raises the GDP/capita using large number sample size with less time periods.

Link between corruption and growth in the industrialized, non-Asian plus Asian countries has been unveiled by (Ali et al., 2010). Study revealed that corruption had bad effects on growth in industrialized countries, no significant impact in non-Asian countries and positive impact has noted in the Asian countries. Likewise, political instability causes corruption and corruption reduces the economic growth and increases the poverty and unemployment in the countries (Matthew and Idowu, 2013).

b. Grease in the Wheels Hypothesis

Survey showed positive effects between corruption and growth of republics referred as the “grease the wheels” hypothesis (Aidt's, 2003). Likewise, Lui(1985) stressed that the corruption had beneficial sound effects on the economic growth in such a way that it reduces the time costs of queues and considered as the “grease the wheels hypothesis”. Caselli (2005), argued that corruption is termed as the “grease the wheels” hypothesis that weak institutions can take the efficient benefits from the factor endowments. Similarly, Meon and Weill (2009) investigated that the countries having the weak institutions can take benefits from the corruption and increase the economic growth of the country.

The corruption shows the beneficial effect in the various ways as it can increase the national income of the countries at the various phases of the economic expansion revealed by Graeff and Mehlkop (2003). The same justification was given by the Matthew and Idowu (2013) claimed that the corruption has been positively associated with the economic growth of Asian countries.

4. DATA AND METHODOLOGY

To measure the effect of corruption, military expenditure, health expenditure, and education expenditure on economic growth the sample will be annual data covering the period 2000-2016 for 50 developing countries including 30 democratic countries and 20 non-democratic countries.

The study used 50 democratic and non-democratic developing economies to analyze the interdependence between different variables. These countries are, Albania, Bolivia, Brazil, Bulgaria, Central Africa, Colombia, Jamaica, Ukraine, Tanzania, Thailand, Namibia, Mali, Pakistan, India, Bangladesh, Nepal, Turkey, Lebanon, Mexico, South Africa, Malawi, Argentina, Fiji, Ghana, Georgia, Indonesia, Kenya, Philippines, Peru, Sri Lanka, Saudi Arabia, Malaysia, Oman, Cameroon, Swaziland, Kazakhstan, Belarus, Iran, Azerbaijan, Morocco, Vietnam, North Korea, Uganda, Angola, Egypt, Zimbabwe, Cambodia, Chad, Madagascar, and Rwanda.

4.1 Economic Model

Various functional forms had used to check the relationship among corruption, economic growth, and governance. The most suitable functional forms of the interested variables are specified.

$$\text{GDP} = f(\text{FDI}, \text{HEXP}, \text{EDUEXP}, \text{MILEXP}, \text{CORRP}, \text{EMP}, \text{GFCF})$$

Explanation of these above variables is specified in table:

Table 1: Variables Description

Variables	Definition	Measurement	Source
EG (Economic Growth)	Economic growth is the process by which a <u>nation</u> 's wealth rises gradually and it is the process of continues transformation	GDP per capita (Current US\$)	World Development Indicators (2018)
HEXP (Health Expenditure)	Health expenditures may be the government or private spending on the health services, family planning practices, nutritional activities and emergency aid.	Health expenditure, total (% of GDP)	World Development Indicators (2018)
MIEXP (Military Expenditure)	Expenditure on equipped forces (containing peacekeeping troops), defense departments, military assistances, paramilitary forces and all military linked space accomplishments.	Military expenditure, total (% of GDP).	World Development Indicators (2018).
CORP (Corruption)	Corruption is usually defined in term of the use of power of public as an individual interest and it is		World governance Indicators (2018)

	universal complicated and multidirectional concept.		
Corruption	Corruption is generally defined as the exploitation of public office for private achievement.	Corruption Perception Index (CPI)	Transparency International

4.2 Econometric Model Specification

As our research in regard with the effect of corruption on economic growth, we estimate three distinct models. First, we estimate the growth model, which includes the main factors of economic growth and level of corruption. Next, we augment the model by including dummy variables (D_{it}^D , D_{it}^{ND}) for democratic and non-democratic countries and interact them with the corruption variable. Our first model, which is considered as a baseline model, takes the following form

$$EG_{it} = \beta_0 + \beta_1 GFCF_{it} + \beta_2 FDI_{it} + \beta_3 EMP_{it} + \beta_4 HEXP_{it} + \beta_5 MIEXP_{it} + \beta_6 EDEX + \beta_7 CORR_{it} + \varepsilon_{it} \quad (1)$$

Where EG_{it} represents economic growth it for country $i(i=1, 2, 3, \dots)$ and t for time. $\beta_1 GFCF_{it}$ is the capital formation, FDI_{it} represents the foreign direct investment, EMP_{it} shows employment rate, $MIEXP_{it}$ denotes the military expenditure, $CORR_{it}$ represents the level of corruption, $HEXP_{it}$ represents the health expenditure, $EDEX_{it}$ represents the education expenditure, β_5 signifies the coefficients, plus ε_{it} represents error term.

Next, to consider the impact of corruption on economic growth, and depending on such factors as a country democratic and non-democratic, we generate dummy variables (D_{it}^D , D_{it}^{ND}) and interact them with the level of corruption variable in the following way, specifically the augmented model takes the following form:

$$EG_{it} = \beta_0 + \beta_1 GFCF_{it} + \beta_2 FDI_{it} + \beta_3 EMP_{it} + \beta_4 HEXP_{it} + \beta_5 MIEXP_{it} + \beta_6 EDEX_{it} + \beta_7 CORR_{it} + \beta_8 CORR_{it} \times D_{it}^D + \beta_9 CORR_{it} \times D_{it}^{ND} + \varepsilon_{it} \quad (2)$$

Where we perform an estimation for each dummy variable separately. The dependency dummy variable D_{it} assigned value of 1 for democratic country at time t and zero then. We define two dummy variables (D_{it}^D , D_{it}^{ND}) for countries classification at time t as follow: the dummy variable for democratic countries (D_{it}^D) takes a value of 1 if country is democratic and zero otherwise, the dummy variable for non-democratic countries (D_{it}^{ND}) assigned value of zero if country is non-democratic and 1 otherwise. The rest of the variables are similar to equation (1).

5. RESULTS AND DISCUSSION

We have collected the data for 50 democratic and non-democratic developing countries from different sources. The data has been expressed in figure.

Figure 1: Graphical Representation of Economic Growth in democratic and non-democratic developing economies

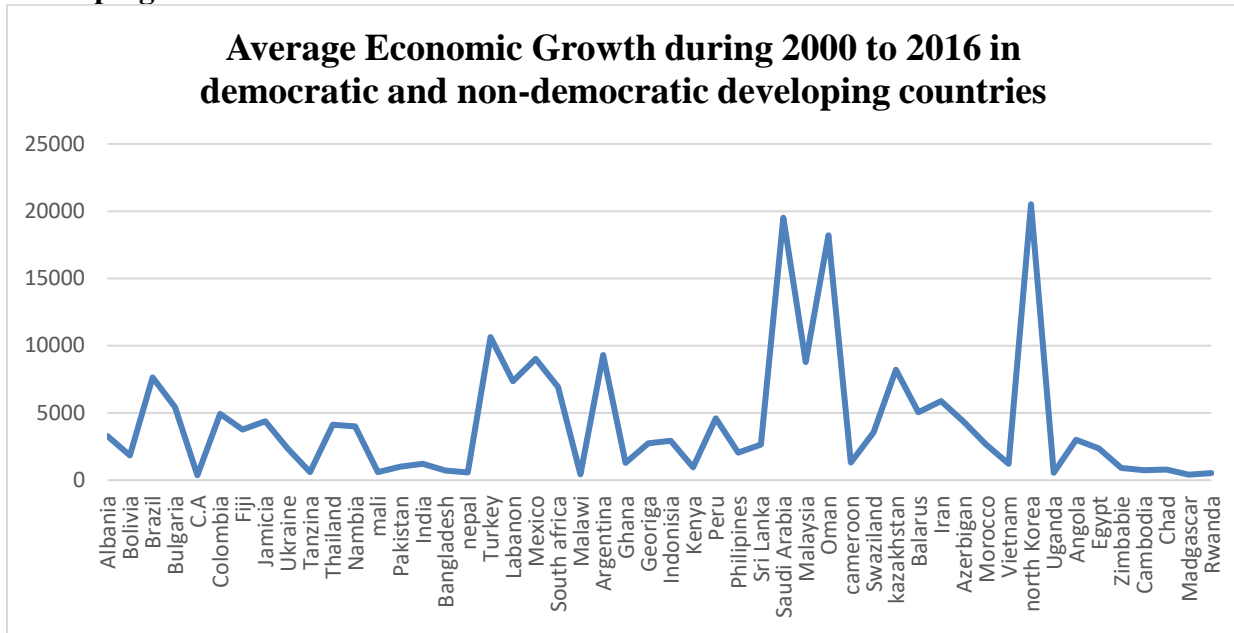


Figure1 shows average economic growth statistics for 50 democratic and non-democratic developing countries of the year of 2000-2016. In this figure economic growth rate rate is taken on Y-axis and democratic and non-democratic developing economies are represented on X-axis. We have calculated the average economic growth rate (GDP per capita, total % of GDP) for the year from 2000 to 2016. North Korea has the highest rate of economic growth. On the other hand, countries like, Albania, Central Africa, Pakistan, Madagascar, Rwanda, Cameroon, and Uganda have lowest rate of economic growth during 2000 to 2016.

Figure 2: Graphical Representation of Corruption in Democratic and Non-Democratic Developing Economies

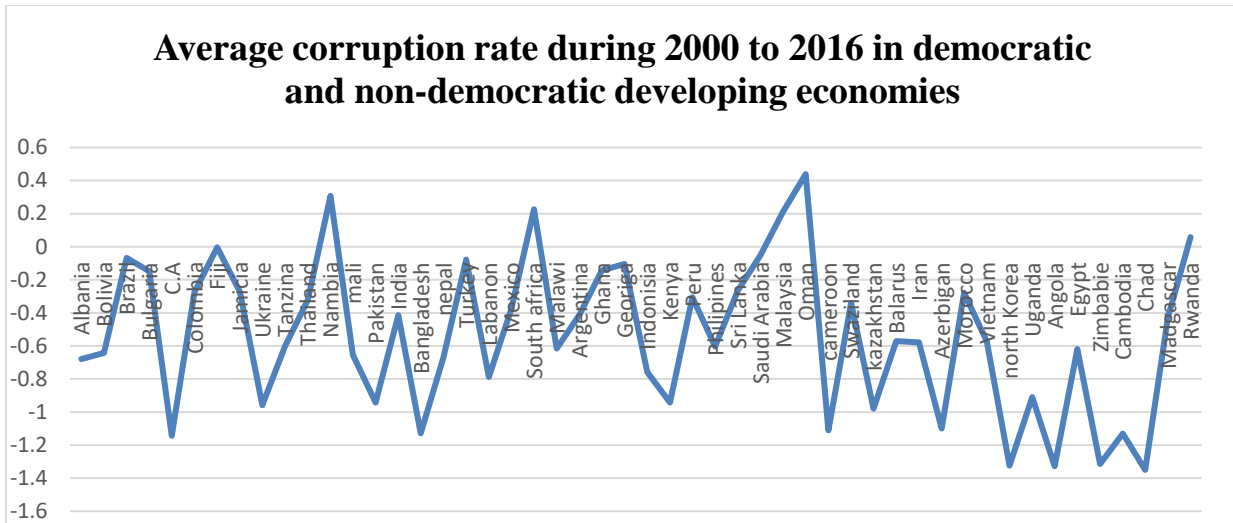


Figure 2 shows average corruption rate statistics for 50 democratic and non-democratic developing countries of the year of 2000-2016. In this figure corruption rate rate is taken on Y-axis and democratic and non-democratic developing economies are represented on X-axis. We have calculated the average corruption rate (corruption perception index, CPI) for the year from 2000 to 2016. The figure shows that Chad country has highest corruption rate during 2000 to 2016. During this time period -1.3 corruption rate is occurring in Chad. Angola country has second highest corruption.

Table 2: Result of Panel Unit Root Test

Variables	T-STATISTICS	PROB VALUE
LGDP	-5.3136	0.000
LHEXP	-4.5424	0.000
LEMO	-16.9082	0.000
LGFCF	-4.5351	0.000
LEDEXP	-6.8800	0.000
LMIEXP	-5.7357	0.000
CORRP	-15.8355	0.0037
FDI	-5.4498	0.000

5.3 Durbin-WU-Huisman Test

It is used to detect the endogeneity in the model. Endogenous variables have values that are detected by other variables in the system.

Table 5.3: Huisman Test Results

Durbin-WU-Huisman test	Probe-Value
Chi-Square	0.0000

The probe Value of Chi-Square is less than 0.05. It means that there exists endogeneity problem.

Results for Developing Economies

5.4 The Corruption's impact on Economic Growth

Table 5.4: Results of Corruption's impact on Economic Growth

The results of GMM for developing economies are given in table

Dependent variable = Economic Growth			
Variables	Coefficient	Std. Err.	Probe-Value
LFDI	.0277214	.0028906	0.000
LEDUEXP	.0323217	.0081201	0.000
LHEXP	.011373	.0039571	0.004
LMIEXP	-.0326692	.0082651	0.000
LGFCF	.1376248	.0043727	0.000
CORRP	.066446	.0037631	0.000
LEMPO	.046999	.0048699	0.000

This positive impact of corruption is stable with prior studies like, Aidt's, (2003) showed the positive effects of corruption on economic growth of countries referred as the "grease the wheels" hypothesis. Likewise, Lui (1985) stressed that the corruption had beneficial effects on the economic growth in such a way that it reduces the time costs of queues and considered as the "grease the wheels hypothesis". Caselli (2005), argued that corruption is termed as the "grease the wheels" hypothesis that weak institutions can take the efficient benefits from the factor endowments. Similarly, Meon and Weill (2009) investigated that the countries having the weak institutions can take benefits from the corruption and increase the economic growth of the country.

The corruption shows beneficial effect in the various ways as it can increase the national income of the countries at not the same stages of the economic development revealed by Graeff and Mehlkop (2003). The same justification was given by the Matthew and Idowu (2013) argued that the corruption has positive effects on the Asian countries growth.

Our results supported previous studies such as, Karagol (2006), Dunne and Tian (2015), Chang et al. (2011). Manamperi (2016) investigated that the military spending and economic growth are inversely related because due to the allocation of large amount of government expenditure on the military sector the other major sectors such as health , education, capital formation and infrastructure would get not as much and ultimately the economic growth slows down.

According to the Yakovlev (2007) as the government expenditure in the military sector increases it develops the technological changes and may lead to the civilian spill overs of the economy. On the other hand, the excess military expenditure overburdens the economy and may lead to reduction in the massive amount of resources used by other sectors. Excessive amount of government expenditure is also the reason of inflationary pressure on the economy. Mylonidis (2008) claimed that the military expenditure and economic growth of country is negatively related. Thus, Arshad et al. (2017) indicated that there occur the negative and significant relationship concerning military expenditure and economic growth due to the presence of external and internal conflicts.

Empirical results supported the previous studies such as Akut & Sayek, (2005), Adeolu, (2007), Wang, (2005), and Levine, (2002). Its explain that enhancing the economic growth by the FDI is that its interaction with the trade openness and efficient productivity gains with the technological advancement of the countries give raise to the economic growth of the countries.

Kose (2006) stressed that the impact of FDI depends on the host country's economic condition, whether the host country has these characteristics to obtain the benefits from the FDI which are efficient market financial development, better institutional quality, good governance, efficient policies and projects at the macro level as well as political stability. According to Anwar and Nguyen (2010), FDI play significant role as the tool of transferring the technology between the developed and developing nations.

Results supported the existing findings such as Aboubacar and Xi (2017), Bakare A.S and Sanmi (2011), Martins (2005), Agenor (2007), Churchill et al. (2015). Its explain that healthy nation is the wealthy nation; it means that the healthy people prove more productive for their nation rather than sick people. By improving the health of the people of the country will prove to cause the increased level of economic growth as other things remaining the same. Similarly, WHO Commission on Macroeconomic and Health (2001) stressed that by improving the health condition of the people of the country the poverty eradication and the developmental goals achieved. Due to the reduction of the poverty the economic growth fosters rapidly.

According to Kurt (2015) the healthy person has increased the life expectancy rate and proves more efficient and productive. Healthy person saves more and invest further in the development of human capital and proved beneficial for his country. Increased productivity enhances the aggregate demand and which ultimately increased the economic growth. On the other hand, people with bad health are not productive and inefficient; they proved as burden on their families as well as on their country.

Our results stable with the earlier studies such as Ugwuegbe & Uruakpa (2013), and Kanu & Ozurumba (2014). Economic growth can be increased through the capital formation activities such as investment in the increased level of production in the sector of agriculture, mining, industry, and development in the technology (R&D sector), infrastructure (schooling, hospitals, roads, railways). So, the capital formation has positive impacts on the economic growth of the country (Jhing, 2006; Ainabor et al., 2014).

Adhikary (2011) capital formation increases the economic growth by increasing the investment and investment causes more employment opportunities that will leads to the higher productivity and higher income level, which encourages the higher savings ratio as well, all this encourages the more investment and promotes higher economic growth of a nation. Ainabor et al. (2014) claimed the positive relationship between capital formation and economic growth in the economy of Nigeria over the time period 1960 to 2010. It has been concluded that capital formation increases the national savings level that leads to the higher investment, and consequently the economic growth increases. The P value of employment is (0.000) shows that the GDP is significant at 1% in the model.

Our results supported the previous studies such as, Landman (2002), and Biyase and Bonga-Bonga (2007), Swane and Vistrand (2006). According to Eita and Ashipala (2010) the relationship between employment and economic growth was positive. The positive relationship of employment with economic growth support the argument that, when the employment level rises the productivity also increases, which raises the economic growth, similarly encouraging the more investment practices would reduce the unemployment rate and increases the economic growth.

The results have shown that education expenditure has a significant as well as positive effect on economic growth. According to the results of above table we explain the results of education expenditure is positively related with GDP if the education expenditure increases by one % then

GDP increases by .032317 percent. The P value of education expenditure is (0.000) shows that the GDP is significant at 1% in the model.

This positive impact of education expenditure is stable with the prior studies such Gamlath and Lahiri (2017), Dissou et al. (2106), Voyvoda and Yeldan (2015), Mercan and Sezer (2014), Benos and Zotou (2014). This positive impact of education expenditure supports the argument that Mariana (2015) concluded that the relationship between education and economic growth is positive. Education expenditure increases the economic growth by increasing the potential of the labor productivity through knowledge accumulation and technological development.

In the similar vein, the education has the several benefits for the economy as it can reduce poverty brings the social and political stability in the economy and it encourages the investment, consequently the economic growth increases. Education may lead to the more employment generation opportunities and provides the higher skilled workers which give the higher productivity and higher output level. In short, education not only responsible for the development on economic level, but it leads to the overall national growth process of all nations (Babatunde and Adefabi, 2005; Afzal et al., 2010). Thus, according to Hanushek and Wooseman (2008) education greatly influence the economic growth by increasing the labor force participation, that may lead to foster the productivity and output level as well as the transitional growth. The education results in the more advanced technologies and innovations, knowledge about the market conditions through which the economic growth of the country increases.

n rate, -1.3 corruption rate is occur in Angola.

Different Corruption's effects on Economic Growth across Political Regions

The results of GMM for Democratic developing economies are given in table

Table 5.6: Results of Corruption's impact on economic growth in democratic countries

Dependent variable = Economic Growth			
Variable	Coefficient	Std. err.	Probe-Value
LFDI	.0240606	.003044	0.000
LEDUEXP	.0161298	.0054135	0.003
LHEXP	.0026299	.0090471	0.771
LMIEXP	-.0251101	.0103289	0.015
LGFCF	.1340305	.0043987	0.000
CORRP	.0762015	.0089805	0.000
LEMPO	.0479255	.0050666	0.000
CORRPDEMO	-.04583	.0131475	0.000

Corruption's Impact on Economic Growth in Democratic Countries

The empirical results have shown in the regard as corruption in democratic regions has a significant as well as negative effect on economic growth. According to the results of above table we explain the results of interaction between corruption and democratic regimes is negatively related with GDP of democratic regimes if the corruption of democratic regimes decreases by one % then GDP increases by -.04583 percent. The result of other variables are constant with first model. This negative impact of corruption in democratic countries is constant with the findings of some earlier studies. According to the Mohtadi and Roe (2003), claimed that corruption is negatively related with democracy because of the non-accountability of public fund by the democratic institutions. Similarly, Drury et al. (2006) investigated the relationship concerning corruption and democracy and its impact on economic growth. The study used the sample of 100 countries over the time

period 1982 to 1997. The study concluded that the corruption has negative impact on democracy which results in lower economic growth. Likewise, Bueno de Mesquita et al. (2001) has analysed that corruption played negative role in democracies by which economic growth decreases. Democracy and economic growth were negatively related because of the higher corruption levels (You, 2011).

Likewise, Narayan et al. (2011) concluded that the democracy and income level were negatively related due to the higher corruption level, which reduces economic growth of an economy. Thus, Aisen and Veiga (2013) stressed that there was negative relationship exist concerning democracy and economic growth because of the higher rent seeking behavior and political instability which reduces the physical capital accumulation. Jong-A-Pin (2009) found out that due to the political instability in the democratic countries is the cause of low economic growth. Similarly, Knutsen (2011) studied democracy-growth nexus by using the sample of 100 countries covered the time span 1820-2002 concluded that democracy has negative relationship with economic growth. Likewise, Rachdi and Saidi (2015) have analyzed the negative relationship concerning the democracy and economic growth as a result of the weak institutional quality plus high level of corruption. The example of developing nations, democracy and economic growth were negatively related due to the massive rent-seeking behavior (Hoeffler, 2009).

Table 5.7: Results of Corruption's impact on economic growth in non-democratic countries

Dependent variable = Economic Growth			
Variable	Coefficient	Std. Err.	Probe-Value
LFDI	.0240606	.0030444	0.000
LEDUEXP	.0161298	.0054135	0.003
LHEXP	.0026299	.0090471	0.771
LMIEXP	-.0251101	.0103287	0.015
LGFCF	.1340305	.0043987	0.000
CORRP	.0303715	.0081925	0.000
LEMPO	.0479255	.0050666	0.000
CORRP NON_DEMO	.04583	.0131475	0.000

Corruption's Impact on Economic Growth in Non-Democratic Countries

The empirical results also show that corruption in non-democratic regions has significant as well as positive effect on economic growth. According to the results of above table we explain the results of interaction between corruption and non-democratic regimes is positively related with GDP of non-democratic regimes if the corruption of non-democratic regimes increases by one % then GDP increases by .04583percent. The result of other variables are constant with first model. This negative impact of corruption in democratic countries is constant with the findings of some earlier studies Our empirical results supported the study; Bueno de Mesquita et al. (2001) investigated the positive relationship among corruption and dictatorship and its impact on economic growth. The study has been concluded that due to the minor impact of supporting on dictatorships result in the higher corruption behavior by the dictators which was not noticed by the public and they will not account the any sort of outrage by the public and they consistently involve in the corrupt practices. The study high-lightened the example of Zaire from the time span over 1962 to 1994, there was high corruption in the dictatorship rule of Mobuto, who worn out the 90

percent of road network by considering that, this sort of misusing of resources in the infrastructure sector to corrupt practices may not prove harmful for his ruling power.

Conclusion

Recent contributions in the literature increasing economic growth of developing countries have often stressed on the importance of institutional and political causes in describing present economic performance. Several empirical evidences established that kind of governmental regimes considered an essential factor of the corruption- growth nexus. The study uses the panel data of 50 developing countries including 30 democratic and 20 non-democratic over the time period from 2000 to 2016. Data is taken from the WDI (World Development Indicators) and WGI (World Governance Indicators). Study used economic growth as the dependent variable and corruption, capital formation, employment, health expenditure, education expenditure, military expenditure and governance index are used as independent or control variables for the estimation of results. Study uses the 4 models, in the first model the overall effect of corruption on economic growth is examined and it is concluded from the results that corruption supports the 'grease' hypothesis and play the positive and significant role in promoting the economic growth as an evidence given by the literature that Graeff & Mehlkop (2003) revealed that the corruption shows beneficial effect in the various ways as it can increase the national income of the countries at the different stages of the economic development. In the second model the impact of corruption on economic growth in democratic and non-democratic countries is investigated and found out that corruption plays negative role in democratic countries and have bad impacts on the economic growth as well as Narayan et al. (2011) concluded that the democracy and income level were negatively related due to the increased corruption level, which reduces the economic growth of the country. Thus, Aisen and Veiga (2013) stressed that there was negative relationship exist between democracy and economic growth because of higher rent seeking behavior and political instability which reduces the physical capital accumulation., whereas, in the non-democratic countries the impact of corruption is negligible moreover, economic growth increases in the outcomes and it is sustained by theoretical evidences like, dictatorial regimes can efficiently create the higher saving rates and investments which ultimately increase the economic growth (Leftwich, 2000; Geddes, 2003; Knutsen, 2010). According to Gandhi (2008), the institutions into the non-democratic regimes enhance the growth by developing the economic growth promoting institutions.

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