**Corruption, Rentier States and Economic Growth**

**Where do The GCC Countries Stand?**

**Nicholas Apergis**

University of Derby

Derby, United Kingdom

n.apergis@derby.ac.uk

**Mohamed Sami Ben Ali**

College of Business & Economics

Qatar University, Doha, Qatar.

msbenali@qu.edu.qa

**Abstract**. Countries with vast natural resources usually display low economic outcomes and corruption is always considered as a main economic hinderer in this regard. We consider in this study the Gulf Cooperation Countries as endowed with huge natural resources while considering the potential role of corruption on their economic growth. We first theoretically discuss both the cursing and the blessing effect of natural resources on countries’ economic outcomes. The empirical analysis employed the panel GMM approach to explore whether and how the investment channel and the political stability channel can contribute to explaining the link between corruption and economic growth. Estimation outcomes show that overall corruption negatively impacts economic growth. Given that usually, corruption occurs through the interaction of the business with the public sector, regulatory authorities, as well as policymakers should spend their efforts to improve the transparency of communication between firms and public entities and officials. The result is expected to reduce their discretionary power, as well as the expected gains from corruption. Overall, these countries need to adopt certain institutional reforms, leading to higher accountability, the strength of property rights, and better bureaucratic quality.

 **Keywords:** Corruption, Economic Development, Rentier States, Natural Resources, GCC.

**1. Introduction**

Economic development is at the center of interest of policymakers and academicians worldwide. Policy reports and empirical studies show that many countries endowed with huge natural resources display low economic development. Therefore, resources are in this case cursing and not blessing for economic development. Many studies confirmed this resources curse hypothesis for different regions of the world (Ben Ali et al. 2016; Davis, 2013; Sachs and Warner (1995),).

While many studies in the literature report the cursing effect of natural resources, several resources-rich countries show evidence a blessing effect. The most cited example in the literature is the comparison between the United States and the United Kingdom. The United States outperformed the United Kingdom in the 90’s century although endowed with huge natural resources evidencing the blessing effect of its natural resources. Canada and Norway are also an example of countries where their natural resources widely contributed to their economic prosperity.

It is worth noting that most of the initial literature of the cursing-blessing effect deals specifically with the impact of the natural resources on economic growth (Brunschweiler and Bulte, 2008). However, other studies extend it to a broader set of economic development indicators such as education and health (Shao and Yand, 2014; De Soysa and Gizelis, 2013; Carmignnani and Avom, 2010; Cabrales and Hauk, 2011), income inequality (Goderis and Malone, 2011).

While both effects of natural resources on countries’ economic performance exist in the literature, the interfering effect of the institutional framework seems to be blamed for the cursing impact of these resources (Saha and Ben Ali, 2017; Ben Ali and Saha, 2016; Cabrales and Hauk, 2011). The role of institutions on economic development is therefore crucial (Ben Ali and Krammer, 2016). Specifically, pervasive level corruption in these countries is seen to be a serious blame for the negative outcome on all economic development indicators.

Economic issues of corruption have recently grown in concern for policymakers and academicians worldwide because of its deleterious effect on all sides of economic activity. As far as economic growth is concerned, the literature offers two strands of studies regarding the role of corruption in the process of economic growth. The first kind of studies, in line with Kutan, Douglas and Judge (2013) among others, provide solid evidence that there exists a positive link between corruption and economic development across some Gulf countries. By contrast, in the second kind of studies, Hakimi and Hamdi (2015) explore the same link for the case of fifteen MENA countries and their findings document that corruption hinders economic growth, through the channels of lower private investments and lower foreign direct investments.

Gulf Cooperation Council Countries enjoy huge natural resources. Theoretical and empirical studies usually point out to the cursing effect of these resources on economic growth while other studies support the blessing effect of these resources. We shed the light in this study on the corruption-economic growth nexus within the GCC countries. We show if natural resources in these countries are blessing or cursing while considering the interfering effect of corruption. Section 2 discusses the theoretical framework of the corruption-economic growth and more broadly on economic development. Section 3 presents empirical results on the impact of natural resources on economic growth for the GCC~~Gulf Cooperation Countries~~. Section 4 concludes and presents some policy implications.

**2. Corruption, Growth and Economic Diversification**

Two main strands of studies are documented in the literature providing two different contradictory points of view of the impact of corruption and economic growth. The first strand of literature lies within the context of the “*greasing the wheels of the economy*” theory and advocates that corruption may accelerate economic growth and impact positively economic development as it speeds up the administrative process and minimize the cost (Lui, 1985). The second strand of literature, namely the “*sand the wheel*” theory supports the negative effect view of corruption on economic development as it economically toxics and causes a transfer of resources to unproductive activities (Mauro, 1998; Meon and Sekkat, 2005).

Corruption can affect economic growth through different channels. Corruption can reduce government revenues which will reduce health and education spending (Swaleheen et al., 2019; Ben Ali et al., 2016). Corruption can also undermine foreign direct investment (Wei, 1997). As documented in Ben Ali and Mdhillat (2015), corruption can have negative effects on international trade flows. It is worth noting that the negative effects of corruption depend on whether corruption is organized or arbitrary and opportunistic (Myint, 2000). When corruption is organized, it is possible to measure its amount and extent. However, when it is arbitrary, it is difficult to gauge it.

In a study dedicated to Latin America, Sub-Saharan Africa and in transition economies, Asiedu and Freeman (2009), show that corruption negatively influences the investment level of firms. They also show that the negative impact differs from one region to another depending on the level of corruption. The Indirect effect of corruption on economic growth can be channelled through the financial system. Ahmad and Ali (2010) show that corruption impedes financial development, which in turn decreases economic growth. The same study shows that, contrary to the non-Asian countries, Asian countries show that corruption and growth are negatively linked. In a more recent study, Ugur and Dasgupta (2011), in both poor and high-income countries show a significant direct effect of corruption on economic growth in the poor countries. Similar results have been reported in a recent study by Ajie and Wokekoro (2012), Adenike (2013) for Nigeria. Similarly, Matthew and Idowu (2013) show that political corruption is suspected to hinder economic growth causing poverty and unemployment but also decrease taxes and private investment (Dissou and Yakautsava, 2012).

When considering the deleterious impact of corruption, the general perception about corruption is that rich countries are less affected by corruption than poor countries with low per capita income. Graeff and Mehlkop (2003) argue that rich countries show less corruption than developing counterparts do. Empirical evidence shows also that corruption reacts differently to an increase in national income at different levels of economic development (Saha and Ben Ali, 2017; Ben Ali and Saha, 2016). Costs of corruption on countries’ economic performance are therefore displayed differently. As documented in Saha and Ben Ali (2017), corruption and economic growth are correlated in a nonlinear relationship. The nonlinear relationship, show that at different economic development levels, public officials weight the benefits of a corrupt act against the potential costs. The expectation is that poor countries displaying a low level of income, the cost of corruption is relatively low compared to the cost of corruption in rich countries. Therefore, as natural resources economies achieve higher economic growth paths, they can attain lower corruption levels.

When considering the indirect effect of vast resources endowments, the literature support the idea that resources cause a reduced public capital stock (Bhattacharyya and Collier, 2013). The indirect effect of corruption on economic growth can also arises through their depressing channeling effects on investment, the stock of capital, political instability, and openness (Pelligrini and Gerlagh, 2004; Mo, 2001). Human capital accumulation is another depressing effect on economic growth. Firms can also spend bribes to pursuit rent practices or to evade from rents instead of spending on research and development and to accumulate human capital. A depressing effect of human capital will therefore be channeled to a lower economic growth (Pecorino, 1992). In a similar setting, Ehrlich and Lui (199) show that the growth inhibiting effect of corruption is more pronounced when countries’ human capital stock is low. From a microeconomic perspective, corrupted managers will allocate more time to deal with public corrupted officials instead of allocating it to productive activities (Kaufmann and Wei, 2000).

GCC are countries endowed with large oil and gas resources. Numerous studies and reports point out to some deficiencies for some countries related to the low level of economic growth compared to their vast wealth. Due to these resources, governments in these countries usually do not collect tax from their citizens. Therefore, they are not asked for any accountability and transparency and could misuse these resources. Some resources-rich countries seem to witness a high level of corruption even with this natural wealth, which could have an undermining effect on their economic growth.

As far as corruption is concerned, corruption could obstruct or slow down the diversification of their economies. As evidenced by the natural resources curse, high endowment in natural resources can create a favorable corrupted environment where the need for diversification is not urgent. It is therefore important for countries to spend more effort to tackle the corruption problem while diversifying their economies. Although witnessing low levels of corruption some countries such as Qatar looking forward to reducing the share of natural resources exports in their GDP and diversifying its economy is setting many favorable anti-corruption laws and institutions showing a clear awareness of the negative impact of corruption on economic diversification.

**3. Does Corruption Affect Economic Growth in The GCC Countries?**

Our study intends to discuss and assess the impact of corruption on economic growth in the GCC countries considering, for the first time, potential interfering channels. We start by a descriptive analysis based on the correlation scatter plots for our countries of interest on the period 2000 - 2018. As displayed in Figure 1, the corruption-economic growth nexus is most evident for Bahrain and Saudi Arabia, which suspect that corruption hinders economic growth in these countries. However, for the remaining countries, the trend is not very evident. The further empirical analysis will shed light on this relationship for our sample countries. Therefore, in line with the literature, we consider the following panel equation:

GDPit = ai + β1 FDIit + β2 LABORit + β3 CPIit + β4 GOVit + β5 Iit + β6 TRit + β7 Git + eit

where GDP is GDP per capita, FDI indicates FDI inflows, LABOR shows the labor force, CPI is the corruption index, GOV proxies government efficiency, I shows private investments, TR is trade openness, and G shows government expenditure. ai defines fixed effects, while e is the error term. We use the panel General Method of Moments (GMM) approach and the Hansen test to check for the validity of instruments.

**Fig. 1.** Corruption and economic growth in the GCC.

Annual data for all the GCC countries, i.e. Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates (UAE), spanning the period 2003-2018 were sourced in relevance to these variables: GDP per capita, labor force and measures total number of workers aged between 15 and 64 years old, foreign direct investment and measured as foreign direct investment inflows, government effectiveness capturing the quality of public services, civil services, policy implementation, as well as the credibility of governments in reference to the above qualities; the value of the index ranges between -2.5 and 2.5, while higher values imply better outcomes, private investments measured as gross capital formation, government expenses in terms of percentages of GDP, and trade openness measured as the sum of imports and exports as percentage of GDP. All data except government effectiveness come from the World Bank, with those on government effectiveness coming from the World Development Indicators database. Finally, corruption is measured through the Corruptions Perceptions Index (CPI), provided by *Transparency International*. The index ranges from 0 (a country is perceived to be strongly corrupted) to 10 (a country is considered very low corrupted).

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| **Table 1.** Cross-section dependence (CD) tests |
| GDP | 16.77[0.00]\*\*\* |
| FDI | 19.42[0.00]\*\*\* |
| LABOR | 17.84[0.00]\*\*\* |
| CPI | 23.47[0.00]\*\*\* |
| GOV | 21.09[0.00]\*\*\* |
| I | 18.44[0.00]\*\*\* |
| TR | 19.65[0.00]\*\*\* |
| G | 24.58[0.00]\*\*\* |
| Figures in brackets denote p-values. Significance level: \*\*\*: p≤0.01. |

Our estimation methodology relies on different steps. First, we use the Pesaran (2004) cross-sectional dependence. The test examines the validity of the null hypothesis of cross-sectional independence. The results are reported in Table 1 and they reject the null hypothesis. Next, the analysis makes use of two second-generation panel unit root tests. The first one is the Pesaran (2007) panel unit root test with the null hypothesis implying the presence of a unit root. The second one, recommended by Smith et al. (2004) accounts for both time series and cross-sectional dependence. The null hypothesis associated with all four versions of the test show the presence of a unit root. The results are also presented in Table 2 report that all variables of our model show the presence of a unit root in the levels.

The empirical results are provided in Table 3. Specification (1) describes only the bivariate results (economic growth and corruption variables), while specification (2) presents the multivariate case. With respect to the corruption variable, the findings clearly highlight that corruption worsens economic growth performance. These findings remain consistently similar across both specifications. For our control variables, our estimations show that private investments, government expenses, FDI inflows, trade openness and government efficiency lead to higher economic growth.

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| **Table 2.** Panel unit root tests |
| **Variable** | **Pesaran** | **Pesaran** | **Smith et al. t-test** | **Smith et al. LM-test** | **Smith et al. max-test** | **Smith et al. min-test** |
| **CIPS** | **CIPS\***  |
| GDP | -1.26 | -1.39 | -1.42 | 2.17 | -1.14 | 1.25 |
| ΔGDP | -5.28\*\*\* | -5.49\*\*\* | -5.44\*\*\* | 21.58\*\*\* | -6.69\*\*\* | 6.94\*\*\* |
| FDI | -1.17 | -1.32 | -1.28 | 2.48 | -1.35 | 1.39 |
| ΔFDI | -5.46\*\*\* | -5.68\*\*\* | -6.37\*\*\* | 21.42\*\*\* | -7.14\*\*\* | 7.19\*\*\* |
| LABOR | -1.32 | -1.39 | -1.35 | 2.64 | -1.39 | 1.42 |
| ΔLABOR | -5.49\*\*\* | -5.64\*\*\* | -6.35\*\*\* | 21.64\*\*\* | -6.94\*\*\* | 7.18\*\*\* |
| CPI | -1.29 | -1.38 | -1.35 | 2.75 | -1.48 | 1.51 |
| ΔCPI | -5.68\*\*\* | -5.89\*\*\* | -6.25\*\*\* | 21.46\*\*\* | -6.59\*\*\* | 6.98\*\*\* |
| GOV | -1.32 | -1.39 | -1.37 | 2.78 | -1.42 | 1.47 |
| ΔGOV | -5.56\*\*\* | -5.81\*\*\* | -5.65\*\*\* | 21.62\*\*\* | -6.88\*\*\* | -7.20\*\*\* |
| I | -1.29 | -1.38 | -1.36 | 2.68 | -1.39 | 1.49 |
| ΔI | -5.85\*\*\* | -6.12\*\*\* | -5.99\*\*\* | 22.91\*\*\* | -7.45\*\*\* | 7.62\*\*\* |
| TR | -1.39 | -1.48 | -1.46 | 2.99 | -1.49 | 1.58 |
| ΔTR | -5.97\*\*\* | -6.28\*\*\* | -6.17\*\*\* | 23.51\*\*\* | -6.19\*\*\* | 6.68\*\*\* |
| G | -1.39 | -1.52 | -1.48 | 2.75 | -1.49 | 1.52 |
| ΔG | -5.68\*\*\* | -5.89\*\*\* | -5.75\*\*\* | 22.43\*\*\* | -5.77\*\*\* | 5.98\*\*\* |
| Δ denotes first differences. CIPS\* = truncated CIPS test. Critical values for the Pesaran (2007) test are -2.40 at 1%, -2.22 at 5%, and -2.14 at 10%, respectively. For both tests the results are reported at lag = 4. \*\*\*: p≤0.01. |

In terms of the diagnostics, reported in Table 3, our findings reject the test for second-order autocorrelation, AR (2). They also reject the null hypothesis of difference-in-Hansen tests of the exogeneity of instruments. In terms of the Hansen test, it clearly documents the validity of the instruments used.

The third step in our methodology explores whether and how certain transmission channels can contribute to explaining the link between corruption and economic growth by focusing on two main channels: the investment channel and the political stability channel.

According to Mauro (1995), the investment channel offers such an explanation. In particular, corruption affects economic growth in a negative manner through lower investment projects undertaken. The literature also offers a second channel through which corruption affects economic growth which is the political stability channel. According to theoretical explanations, this channel considers a positive association between income inequality and instability in the society. More specifically, higher income inequality leads to the presence of stronger motivationsby agents to engage in illegal activities, mainly for personal material benefits. As a result, property rights are highly diminished, private investment projects are mitigated and, thus, economic growth is reduced, while income inequality gets higher (Mo, 2000).

Based on the above discussion, Equation (1) changes into the following model:

GDPit = ai + β1 FDIit + β2 LABORit + β3 CPIit + β4 GOVit + β5 Iit + β6 TRit + β7 Git

 + β8 FDIit x CPIit + β9 GOVit x CPIit + β10 Iit x CPIit + eit

where the interaction terms FDI x CPI and I x CPI show the transmission channel of investments, while the interaction term GOV x CPI displays the second transmission channel. The new findings are reported in Table 4. They report evidence that all channels exert a negative effect on economic growth.

In other words, the findings indicate that both the abovementioned channels are substantially important through which corruption exerts a detrimental impact on economic growth. The coefficients β8 and β10 signify the joint indirect effect of corruption on economic growth through both the domestic investment and the foreign direct investment channels, while the coefficient β9 displays the indirect impact of corruption on economic growth through the government effectiveness channel. All three coefficients not only carry the expected sign based on theoretical arguments, but also the estimated results are in line with the literature indicated above, albeit for other groups of countries, that have provided solid evidence that supports a positive effect between economic growth and all the three variables under study that proxy the potential variables through which corruption can impact economic growth (Pellegrini and Gerlagh, 2004; Pellegrini, 2011; among others).

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| **Table 3**. GMM estimates |
| **Variables** | **(1)**  | **(2)**  |
| ΔPCI | -0.088\*\*\* | -0.085\*\*\* |
|  |  [0.00] | [0.00] |
| ΔPCI(-1) | -0.049\*\*\* | -0.042\*\*\* |
|  | [0.00] | [0.00] |
| ΔLABOR |  | 0.075\*\*\* |
|  |  | [0.00] |
| ΔLABOR(-1)  |  | 0.050\*\*\* |
|  |  | [0.00] |
| ΔFDI |  | 0.068\*\*\* |
|  |  | [0.00]  |
| ΔFDI(-1) |  | 0.041\*\*\* |
|  |  | [0.00]  |
| ΔI |  | 0.046\*\*\* |
|  |  | [0.00] |
| ΔI(-1) |  | 0.027\*\* |
|  |  | [0.03] |
| ΔGOV |  | 0.089\*\*\* |
|  |  | [0.00] |
| ΔGOV(-1) |  | 0.051\*\*\* |
|  |  | [0.00] |
| ΔG |  | 0.059\*\*\* |
|  |  | [0.00] |
| ΔG(-1) |  | 0.031\*\* |
|  |  | [0.02] |
| ΔTR |  | 0.078\*\*\* |
|  |  | [0.00] |
| ΔTR(-1) |  | 0.046\*\*\* |
|  |  | [0.01] |
| *Diagnostics* |  |  |
| R2 | 0.58 | 0.69 |
| AR(1) | [0.00] | [0.00] |
| AR(2) | [0.39] | [0.47] |
| Hansen test | [0.54] | [0.59] |
| Difference Hansen test | [0.78] | [0.85] |

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| No. Of observations | 96 | 96 |
| Notes: Figures in parentheses denote p-values. \*\*\*: p≤0.01; \*\*: p≤0.05.  |

In quantitative or economic terms, the sum of the first two coefficients turns out to be (-0.058) + (-0.064) = -0.122, implying that a 1% increase in corruption, leads to 0.12% decrease in both domestic and foreign direct investments, and, therefore, to 0.12% lower growth outcomes, while the coefficient of government effectiveness (-0.077) highlights that a 1% increase in corruption, reduces government effectiveness by 0.08%, which also impact negatively economic growth by 0.08%. It is apparent that the coefficient associated with the government’s efficiency displays the strongest effect on growth against the individual roles of domestic and foreign direct investments. Overall, corruption seems to negatively impact certain economic sections, such as investments and government effectiveness, inducing a negative impact on economic growth.

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| **Table 4**. GMM estimates-Transmission channels |
| **Variables** | **Coefficient** | **p-value** |
| ΔPCI | -0.073\*\*\* | [0.00] |
| ΔPCI(-1) | -0.040\*\*\* | [0.00] |
| ΔLABOR | 0.067\*\*\* | [0.00] |
| ΔLABOR(-1) | 0.042\*\*\* | [0.01] |
| ΔFDI | 0.059\*\*\* | [0.00] |
| ΔFDI(-1) | 0.038\*\* | [0.02]  |
| ΔI | 0.041\*\*\* | [0.01] |
| ΔI(-1) | 0.022\*\* | [0.05]  |
| ΔGOV | 0.069\*\*\* | [0.00] |
| ΔGOV(-1) | 0.037\*\* | [0.02] |
| ΔG | 0.053\*\*\* | [0.00] |
| ΔG(-1) | 0.025\*\* | [0.04]  |
| ΔTR | 0.062\*\*\* | [0.00] |
| ΔTR(-1) | 0.039\*\* | [0.02] |
| ΔFDI x ΔCPI | -0.058\*\*\* | [0.00] |
| ΔI x ΔCPI | -0.064\*\*\* | [0.00] |
| ΔGOV x ΔCPI | -0.077\*\*\* | [0.00] |
| *Diagnostics* |  |  |
| R2 | 0.74 |  |
| AR(1) | [0.00] |  |
| AR(2) | [0.48] |  |
| Hansen test | [0.62] |  |
| Difference Hansen test | [0.87] |  |
| No. Of observations | 96 |  |
| Notes: Figures in parentheses denote p-values. \*\*\*: p≤0.01; \*\*: p≤0.05.  |

**4. Conclusions and Policy Implications**

Experience shows that countries with vast natural resources endowments display low economic growth trends. Actually, when considering countries’ endowments in natural resources and their impact on their economic growth, two main strands of studies arises in the literature: the blessing strand and the cursing effect. The first strand of literature show that huge endowment with natural resources induces a positive impact on their economic growth. The second strand of literature report negative economic outcomes. The institutional framework and more specifically corruption is an interfering effect in the natural resources-economic growth nexus in numerous studies.

Gulf Cooperation Countries are countries with large oil and gas resources. This study empirically explored the influence of corruption on economic growth in the case of the GCC countries, over the period 2003-2018. We employed the panel GMM approach, while the results documented the negative correlation in the corruption-economic growth nexus. These findings are consistent with earlier studies about the negative role of corruption for economic growth in many countries.

Given that usually, corruption occurs through the interaction of the business with the public sector (i.e., firms), regulatory authorities, as well as policymakers should spend their efforts to improve the transparency of communication between firms and public entities and officials. The result is expected to reduce their discretionary power, as well as the expected gains from corruption, while it will definitely mitigate the role of briberies as a connecting link between them. Overall, these countries need to adopt certain institutional reforms, leading to higher accountability, the strength of property rights, and stronger bureaucratic quality. Such reforms could include economic reforms, where both types protect property rights and contribute to better competition conditions, as well as judicial reforms, where laws and regulations are more enforced.

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