

FOREIGN DIRECT INVESTMENT, OIL REVENUES, AND TRADE AS DETERMINANTS OF ECONOMIC GROWTH IN GCC COUNTRIES

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ABSTRACT

This study investigates the roles of foreign direct investment (FDI), oil revenues, and trade in shaping economic growth in Gulf Cooperation Council (GCC) countries over the period 1995–2024. The analysis employs the pooled mean group autoregressive distributed lag (PMG-ARDL) model to capture both long-run and short-run dynamics, and uses fully modified ordinary least squares (FMOLS) for robustness. The results indicate that FDI and oil rents exert positive, statistically significant effects on long-run per capita income. In contrast, merchandise trade does not exhibit a significant contribution to growth. The short-run estimates confirm the presence of a stable adjustment mechanism toward the long-run equilibrium. These findings highlight the dominant role of resource revenues and external capital inflows in the GCC growth process and point to the need for policies that promote diversification and strengthen non-oil sectors.

Keywords: FDI, merchandise trade, oil rents, economic growth

JEL Code: F43, F21, O11, Q32

1 INTRODUCTION

Economic growth remains a significant indicator of economic performance, reflecting improvements in income, employment, and overall welfare. Traditional growth theories emphasize capital accumulation, labour expansion, and technological progress (Solow, 1956; Swan, 1956; Saleem *et al.*, 2020), while more recent approaches incorporate external drivers such as foreign direct investment, trade, and natural resource endowments. FDI contributes to growth through capital inflows, technology transfer, and integration into global production networks (Borensztein *et al.*, 1998; Yimer, 2022; Duodu and Baidoo, 2020). Trade openness enhances efficiency and allows countries to exploit comparative advantages (Frankel and Romer, 1999; Sirag *et al.*, 2018). However, the growth effects of FDI and trade may differ across economies depending on structural characteristics such as resource dependence, institutional quality, and sectoral composition.



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In resource-dependent economies, natural resource revenues often remain the dominant source of growth, shaping both macroeconomic stability and long-term development paths. In the Gulf Cooperation Council (GCC) countries, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, oil revenues have historically driven economic expansion. Nevertheless, dependence on hydrocarbons exposes these economies to external shocks, especially oil price volatility (Sachs and Warner, 1995; Alfaro *et al.*, 2004). Although oil revenues can support infrastructure development and public investment, excessive reliance on hydrocarbons may weaken economic diversification and increase vulnerability to external market fluctuations. This has intensified policy efforts toward economic diversification, with increasing emphasis on FDI and trade as alternative growth drivers. Several GCC countries have therefore introduced long-term economic transformation programs aimed at strengthening non-oil sectors and attracting foreign investment.

Although previous studies have examined the relationships among FDI, trade openness, oil revenues, and economic growth, the empirical findings remain mixed in resource-rich economies. Some studies report positive contributions of FDI and trade to economic growth, while others find limited or insignificant effects due to continued dependence on oil revenues and structural constraints. In addition, much of the existing literature examines these variables separately rather than within a unified empirical framework. The limited number of studies focusing specifically on GCC countries also suggests the need for updated empirical evidence that jointly evaluates the relative importance of FDI, trade, and oil rents in influencing economic growth.

This study investigates the long-run and short-run effects of FDI, merchandise trade, and oil rents on economic growth in GCC countries over the period 1995–2024. By applying the PMG-ARDL approach, the analysis accounts for heterogeneous short-run dynamics while imposing a common long-run relationship. The study contributes to the literature by jointly assessing the roles of foreign investment, trade integration, and oil revenues within a unified framework, thereby providing updated evidence on the determinants of growth in resource-dependent GCC economies.

2 METHODOLOGY

2.1 Data Source

This study uses annual panel data for selected GCC countries, namely Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia, covering the period 1995–2024. All variables are obtained from the World Bank's World Development Indicators (WDI). The United Arab Emirates is excluded due to data availability constraints. Despite the exclusion of the United Arab Emirates due to data limitations, the selected sample still captures the major structural characteristics of GCC resource-dependent economies. Economic growth is proxied by GDP per capita growth (GDPPCG). The explanatory variables include foreign direct investment (FDI), merchandise trade (MERCT), and oil rents (ORT). FDI is measured as net inflows as a percentage of GDP, merchandise trade is measured as the sum of exports and imports of goods relative to GDP, while oil rents represent the share of oil revenues in GDP. All explanatory variables are expressed as percentages of GDP to improve comparability across countries and over time. The selection of variables is consistent with both theoretical and empirical literature on growth in resource-dependent economies, where external capital inflows, trade integration, and natural resource revenues are considered important determinants of macroeconomic performance.

2.2 Model Specification

To examine the relationship between the variables, the baseline model is specified in Equation 1.

$$GDPPCG_{it} = \beta_1 FDI_{it} + \beta_2 ORT_{it} + \beta_3 MERCT_{it} + \varepsilon_{it} \quad (1)$$

where $GDPPCG_{it}$ represents GDP per capita growth, FDI denotes foreign direct investment inflows, MERCT captures merchandise trade, and ORT represents oil rents. The error term ε accounts for unobserved country-specific effects. A positive relationship is expected between FDI and economic growth due to technology transfer, capital accumulation, and productivity spillovers. Merchandise trade is also expected to positively influence growth through increased market access and efficiency gains. However, the effect of oil rents may be either positive or negative depending on whether oil revenues promote productive investment or increase dependence on the resource sector.

2.3 Estimation Technique

The pooled mean group autoregressive distributed lag estimator proposed by Pesaran *et al.* (1999) is employed to estimate both long-run and short-run relationships. The approach allows short-run coefficients, intercepts, and error variances to differ across countries while constraining long-run coefficients to be homogeneous. This is appropriate given the structural similarities among GCC economies alongside potential short-run heterogeneity. The PMG-ARDL approach is appropriate for this study because GCC economies share similar long-run structural characteristics associated with oil dependence, trade integration, and investment policies, although short-run adjustment dynamics may differ across countries. Another advantage of the PMG-ARDL framework is that it can be applied when variables are integrated of mixed order $I(0)$ and $I(1)$, provided none of the variables are integrated of order $I(2)$. In addition, the dynamic lag structure of the ARDL specification helps reduce potential endogeneity and simultaneity bias by incorporating lagged values of the explanatory variables.

The use of a cointegration-based framework also minimizes the possibility of spurious regression and allows the distinction between short-run dynamics and long-run equilibrium relationships. For robustness, fully modified ordinary least squares (FMOLS) is also applied to validate the long-run estimates. FMOLS is employed as a robustness estimator because it corrects for potential endogeneity and serial correlation associated with cointegrated panel regressions. The estimator produces consistent long-run coefficients by accounting for the possible correlation between the regressors and the error term. The PMG-ARDL baseline model is in Equation 2.

$$y_{it} = a_i + \sum_{j=1}^p \beta_{ij} y_{it-j} + \sum_{j=1}^q \delta_{ij} K_{it-j} + \varepsilon_{it} \quad (2)$$

Where y_{it} is the dependent variable, a_i is the constant, β_{ij} is the lag coefficient of the dependent variable y_{it-j} , K_{it-j} represents the regressors with δ_{ij} as their corresponding coefficients, and ε_{it} is the error term in the model.

3 RESULTS

3.1 Descriptive Statistics

Table 1 presents descriptive statistics for the selected variables based on 150 observations. GDP per capita growth exhibits considerable volatility, with a small positive mean and a negative median, indicating uneven growth performance across GCC countries and periods. The wide gap between the maximum value (24.93) and the minimum value (−11.86) further reflects substantial fluctuations in economic performance, likely associated with oil price cycles and external economic shocks. Foreign direct investment shows substantial dispersion, reflecting periodic inflows rather than stable investment patterns. The large variation between the maximum and minimum FDI values suggests that foreign investment inflows differ significantly across GCC economies and over time, partly due to differences in investment policies, market size, and sectoral diversification efforts.

Merchandise trade accounts for a large share of GDP, highlighting the high degree of trade exposure in GCC economies. The relatively high average trade ratio confirms the openness of GCC economies to international markets through hydrocarbon exports and import dependence. Oil rents display wide variation, confirming the central role of hydrocarbon revenues and their sensitivity to global price fluctuations. The substantial dispersion in oil rents also demonstrates the heterogeneity of resource dependence among GCC countries, with some economies relying more heavily on oil revenues than others.

Tab. 1 Descriptive Statistics

	GDPPCG	MERCT	ORT	FDI
Mean	0.284	77.42	29.03	2.324
Median	−0.183	75.70	28.26	1.112
Maximum	24.93	129.3	58.36	29.52
Minimum	−11.86	40.60	2.67	−2.760

3.2 Cross-Sectional Dependence and Unit Root Tests

Cross-sectional dependence tests in Table 2 reveal strong evidence of interdependence among GCC economies for GDP per capita growth, merchandise trade, and oil rents, suggesting the presence of common shocks and regional spillovers. This outcome is expected given the strong economic integration of GCC countries through oil markets, regional trade linkages, and similar macroeconomic structures. Accordingly, second-generation panel unit root tests are employed. The CIPS results in Table 3 indicate that the variables exhibit mixed orders of integration but become stationary after first differencing, satisfying the requirements for panel ARDL estimation. Since none of the variables are integrated of order I(2), the PMG-ARDL framework remains appropriate for estimating both short-run and long-run relationships.

Tab. 2 Cross-sectional dependence test

Test	GDPPCG	FDI	MERCT	ORT
Breusch-Pagan LM	24.02***	15.06	67.7***	196***
Pesaran Scaled LM	3.136***	1.131	12.90***	41.61***
Bias-corrected Scaled LM	3.050***	1.045	12.82***	41.53***
Pesaran CD	3.322***	1.666	6.140***	13.65***

Note: ***indicates statistical significance at the 1%

Tab. 3 CIPS unit root results

Variable	Constant	Constant & Trend
GDPPCG	-2.576***	-2.271
Δ GDPPCG	-4.821***	-4.803***
MERCT	-0.962	-1.999
Δ MERCT	-4.269***	-4.083***
FDI	-3.055***	-3.230***
Δ FDI	-5.177***	-5.078***
ORT	-1.911	-2.493
Δ ORT	-4.115***	-4.346***

Note: ***indicates statistical significance at the 1%

3.3 PMG-ARDL Estimation Results

The PMG-ARDL long-run estimates in Table 4 indicate that foreign direct investment and oil rents exert positive, statistically significant effects on economic growth in GCC countries. The coefficient of FDI is positive and statistically significant at the 1% level, indicating that increases in foreign capital inflows contribute positively to GDP per capita growth. Specifically, a one-unit increase in FDI is associated with approximately a 1.27-unit increase in economic growth, suggesting that foreign investment plays an important role in promoting capital accumulation, technological transfer, and productivity enhancement in GCC economies. Oil rents also positively influence growth, reflecting their role in financing infrastructure development and public investment in resource-rich economies. The positive coefficient on oil rents confirms the continued importance of hydrocarbon revenues as a major source of economic expansion in GCC countries despite ongoing diversification efforts. Merchandise trade, however, does not exhibit a statistically significant long-run effect on growth. This finding suggests that trade expansion alone may not be sufficient to generate sustained income growth when exports remain heavily concentrated in the energy sector, and non-oil export diversification remains limited. In the short run, the error-correction term is negative and statistically significant. The coefficient of -0.667 implies that approximately 66.7% of short-run disequilibrium is corrected within one period, indicating a relatively rapid adjustment toward long-run equilibrium following economic shocks.

Tab. 4 Estimated coefficients from the PMG model

	Coefficient	Std. Error	t-Statistic	p-value
Long run				
FDI	1.266	0.279	4.529	0.000
ORT	0.296	0.052	5.621	0.000
MERCT	-0.030	0.070	-0.440	0.660
Constant	3.138	9.143	0.343	0.732
Short-run				
ECT (-1)	-0.667	0.210	-3.173	0.002
Δ FDI	-0.841	0.716	-1.174	0.242
Δ ORT	-0.317	0.302	-1.049	0.296
Δ MERCT	-0.297	0.431	-0.689	0.491

3.4 Robustness Analysis

FMOLS estimates in Table 5 corroborate the baseline PMG-ARDL findings. Foreign direct investment and oil rents remain positive and statistically significant determinants of economic growth, confirming the robustness of the long-run relationship. The consistency of coefficient signs and statistical significance across both PMG-ARDL and FMOLS estimations strengthens the reliability of the empirical results and reduces concerns regarding model instability. Merchandise trade continues to show no significant effect, reinforcing the view that trade-driven growth in the GCC may depend on structural diversification rather than trade volume alone. The robustness results, therefore, support the argument that economic growth in GCC countries remains more strongly associated with foreign investment inflows and oil-based revenues than with merchandise trade expansion.

Tab. 5 FMOLS estimated results

Variable	Coefficient	Std. Error	t-Statistic	p-value
FDI	0.214	0.081	2.633	0.009
ORT	0.179	0.037	4.802	0.000
MERCT	0.032	0.032	1.002	0.317

4 DISCUSSION

The empirical findings indicate that foreign direct investment and oil rents are the main drivers of economic growth in GCC countries, while merchandise trade does not exert a statistically significant long-run effect. The PMG-ARDL estimates show that FDI has a relatively large positive coefficient, suggesting that foreign capital inflows contribute substantially to GDP per capita growth in GCC economies. The positive contribution of oil rents further reflects the continued reliance of GCC economies on hydrocarbon revenues as a primary source of income and public investment financing. This outcome is consistent with resource-based growth arguments, where natural resource revenues support infrastructure development, fiscal expansion, and public sector investment. The positive and statistically significant oil rent coefficient confirms that hydrocarbon revenues remain important to economic activity despite ongoing diversification policies across the GCC region. However, such dependence also exposes these economies to external shocks and fluctuations in global oil prices (Mahmood *et al.*, 2022). Consequently, periods of declining oil prices may weaken fiscal sustainability and reduce the capacity of governments to maintain growth-enhancing expenditures.

The positive and significant effect of foreign direct investment supports the view that external capital inflows enhance growth through technology transfer, productivity improvements, and integration into international markets. This finding aligns with the predictions of endogenous growth theory, which emphasizes the role of knowledge spillovers and capital accumulation in sustaining long-run growth. In the GCC, FDI may also contribute to ongoing diversification efforts by supporting the development of non-oil sectors (Kahouli and Chaaben, 2022). The magnitude and significance of the FDI coefficient further suggest that policies aimed at attracting high-quality and technology-intensive foreign investment could generate substantial long-run growth benefits for GCC economies.

In contrast, the insignificant effect of merchandise trade suggests that trade openness alone is not sufficient to drive growth in resource-dependent economies. This may be explained by the structure of GCC exports, which remain heavily concentrated in hydrocarbons with limited value addition. As a result, increases in trade volume do not necessarily lead to broader economic development or productivity gains. The insignificant trade coefficient implies that the benefits of trade may depend more on export composition and industrial diversification than on trade intensity itself. This finding indicates that the growth impact of trade depends on the composition and diversification of exports rather than trade openness alone.

The results suggest that economic growth in the GCC is primarily shaped by resource revenues and capital inflows, while the contribution of trade remains conditional on structural transformation. Policies aimed at enhancing diversification, promoting value-added exports, and strengthening the absorptive capacity of FDI are therefore essential for achieving sustainable long-run growth. In particular, GCC governments may strengthen long-run economic resilience by investing oil revenues in technology-driven industries, manufacturing, renewable energy, logistics, and human capital development to reduce excessive dependence on hydrocarbons.

5 CONCLUSIONS

This study examined the determinants of economic growth in selected GCC countries over the period 1995–2024, focusing on foreign direct investment, oil rents, and merchandise trade within a PMG-ARDL framework, with FMOLS estimates providing robustness. The findings show that oil rents and FDI are significant long-run drivers of per capita income growth, confirming the dominant role of resource revenues and external capital inflows in the GCC growth process. The empirical results indicate that FDI exerts a relatively stronger growth effect compared to the other explanatory variables, highlighting the importance of foreign capital inflows in supporting diversification and productivity improvements. In contrast, merchandise trade does not exert a statistically significant influence on long-run growth, indicating that trade expansion alone is insufficient in the absence of export diversification.

These results suggest that sustained economic growth in the GCC depends on effective management of resource revenues and the ability to attract productive foreign investment. While trade remains an important component of economic activity, its growth-enhancing role appears to depend on structural transformation toward more diversified and value-added exports. Policy efforts should therefore focus on reducing dependence on hydrocarbons, strengthening non-oil sectors, and improving the institutional and economic conditions necessary to maximize the benefits of FDI. The study therefore supports ongoing economic diversification strategies across GCC countries aimed at promoting private sector development, technological advancement, and broader economic transformation. Overall, the findings emphasize the importance of balancing resource-based growth with long-term diversification strategies to achieve sustainable economic development in GCC economies.

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