The Impact of Governance on Foreign Direct Investment in Gulf Countries: A Panel Quantile Regression Approach

BOUATELLI Mohamed *

Laboratory of Studies and Research in Digital Economy
Higher School of Management and Digital Economy (Algeria)

mbouatelli@esgen.edu.dz

Received: 26/08/2025 **Accepted:** 23/10/2025 **Published:** 19/12/2025

Abstract :

This study examines the impact of governance on Foreign Direct Investment (FDI) inflows in six Gulf countries from 2000 to 2023. A composite governance index was constructed using six World Bank indicators through Principal Component Analysis (PCA), and Panel Quantile Regression with country fixed effects was applied to account for heterogeneous effects across different levels of FDI inflows, with all estimations performed using R software.

The findings show that governance has no significant role at low and median levels of FDI, but becomes strongly positive at high inflows. Economically, this suggests that good governance is not the main trigger for attracting initial investments, which in the Gulf are often driven by natural resources or market opportunities. Instead, governance gains importance once countries already receive substantial FDI, as it provides transparency, stability, and investor protection. In this way, governance acts as a reinforcing factor that sustains and scales investment flows rather than initiating them.

Keywords: Governance, Governance Indicators, Foreign Direct Investment, Gulf Countries, Panel Quantile Regression Approach.

JEL classification codes: F21; G38; O43; C23.

* *Corresponding author: BOUATELLI Mohamed, mbouatelli@esgen.edu.dz*

Introduction:

In the globalized economy, governance has become a cornerstone for attracting and sustaining Foreign Direct Investment (FDI). Effective governance, embodied in strong institutions, transparent regulations, the rule of law, and the fight against corruption, plays a decisive role in shaping the investment climate. By fostering stability and credibility, good governance reduces uncertainty, minimizes transaction costs, and enhances investor confidence, thereby creating favorable conditions for long-term capital inflows.

For Gulf Cooperation Council (GCC) countries, governance is particularly relevant given their heavy reliance on natural resource revenues and their strategic efforts to diversify economies. Despite their financial attractiveness, these countries face institutional and structural challenges that may affect their ability to secure sustainable FDI. Strengthening governance systems thus emerges as a vital component of economic reforms aimed at building resilient, competitive, and investment-friendly environments.

In this context, international governance indicators published by the World Bank provide a comprehensive framework for measuring institutional quality. By combining these six dimensions, control of corruption, government effectiveness, political stability and absence of violence, regulatory quality, rule of law, and voice and accountability, researchers can build a composite index through Principal Component Analysis (PCA) that captures the multidimensional nature of governance. To explore its effect on FDI inflows, advanced panel econometric techniques, such as Panel Quantile Regression, are employed to account for heterogeneity across countries and investment levels.

Research Problem:

The central question of this study is:

To what extent do governance indicators influence FDI inflows in Gulf countries during the period 2000–2023?

Research Hypothese:

Governance exerts a significant effect on FDI inflows in Gulf countries.

Research Objectives:

This study aims to:

- Construct a composite governance index for Gulf countries using PCA;
- Examine the effect of governance on FDI inflows using Panel Quantile Regression;
- Capture heterogeneity across different levels of FDI inflows;
- Provide empirical insights to policymakers in Gulf countries on the importance of governance reforms in attracting sustainable investment.

Research Significance :

The significance of this study lies in its focus on the Gulf region, where governance and institutional reforms are increasingly viewed as levers for economic diversification beyond oil dependency. By adopting modern econometric approaches and reliable international data, this research contributes to the empirical literature on governance and FDI. Its findings not only underline the role of governance in shaping investment decisions but also provide practical implications for policymakers seeking to enhance institutional quality and ensure the long-term sustainability of foreign capital inflows.

I. The Conceptual Framework of Governance:

This section explores the concept of governance by focusing on its definition and indicators.

1. Definition of Governance:

Governance has been described in multiple ways depending on the perspective of international institutions. According to the United Nations, governance refers to: the process of decision-making and the process by which decisions are implemented. (UNESCAP, 2009)

The World Bank defines it as: the manner in which power is exercised in the management of a country's economic and social resources for development. (World Bank, 1991, p.15)

Similarly, the International Monetary Fund (IMF) emphasizes governance as a framework that promotes transparency in government actions, evaluates the efficiency of public resource management, and ensures a supportive environment for private sector activity. (Tawfiq, 2005, p.25)

2. Good Governance Indicators:

The Worldwide Governance Indicators (WGI), developed by the World Bank, are widely recognized as one of the most comprehensive and reliable instruments for assessing governance quality. These indicators encompass political, economic, and institutional dimensions, and are structured around six core components: (Kaufmann, 2010, p37)

2.1. Voice and Accountability:

This dimension evaluates the extent to which citizens are able to engage in the selection of their government. It also reflects freedoms of expression and association, as well as media independence. More broadly, it captures democratic practices, political rights, and civil liberties.

2.2. Political Stability and Absence of Violence/Terrorism:

This indicator measures the probability of political unrest and violent events driven by political motives. It takes into account risks such as ethnic conflicts, terrorism, armed confrontations, constitutional instability, social disturbances, or military interventions.

2.3. Government Effectiveness:

This dimension focuses on the performance and credibility of public administration. It assesses the quality of public services, the professionalism and independence of the civil service, the effectiveness of policy formulation and execution, as well as the government's ability to adhere to its commitments. It relies on multiple sources that evaluate executive institutions, bureaucratic efficiency, policy implementation, and the provision of essential services such as healthcare.

2.4. Regulatory Quality:

This indicator captures the government's capacity to design and implement policies and regulations that foster private sector activity, stimulate economic growth, and support overall development.

2.5. Rule of Law:

This component emphasizes the impartiality of laws and the degree of compliance among citizens and institutions. It reflects the principle that all individuals—including political leaders and civil servants—are bound by the law. It also gauges public confidence in the legal system, the enforcement of contracts, protection of property rights, effectiveness of the police and judiciary, and the likelihood of crime and violence.

2.6. Control of Corruption:

This indicator evaluates the extent to which public power is misused for private purposes. It covers both minor and large-scale forms of corruption, including state capture by elites and interest groups. It also considers the diversion of public resources by political and economic actors for personal gain.

II. Presentation of Study Data:

1. Study Methodology:

This study examines the impact of governance on Foreign Direct Investment (FDI) inflows in six Gulf countries during 2000–2023 using a Panel Quantile Regression (PQR) approach with country fixed effects. A composite governance index was constructed through Principal Component Analysis (PCA) on the six World Bank governance indicators, with data adequacy confirmed by KMO and Bartlett's tests. To ensure stationarity, the first difference of the governance index was used, while GDP, GDP per capita, and

trade openness were log-transformed, and FDI and inflation retained in their original form. The PQR method was applied across the 25th, 50th, and 75th quantiles to capture heterogeneous effects of governance and macroeconomic variables on FDI inflows, with all analyses conducted using R software.

2. Sample and Study Period:

The study focuses on the six Gulf countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, over the period 2000–2023.

3. Data Sources:

All data were obtained from reputable international databases. Governance indicators were sourced from the World Bank's Worldwide Governance Indicators (Worldwide Governance Indicators, 2025), while economic variables were collected from the World Bank's World Development Indicators (World Bank Indicators, 2025).

4. Study Variables:

The study variables, along with their conceptual definitions, measurement scales, and respective data sources, are summarized in Table (1).

Table 1: Variables Constituting the Study Model

Variable Code	Variable Name	Variable Nature	Data Represented by the Variable	Source
CC	Control of Corruption	Independent	Index ranging from -2.5 (weak control) to +2.5 (strong control)	World Bank – WGI
GE	Government Effectiveness	Independent	Index ranging from -2.5 (low effectiveness) to +2.5 (high effectiveness)	World Bank – WGI
PS	Political Stability and Absence of Violence/Terrorism	Independent	Index ranging from -2.5 (low stability) to +2.5 (high stability)	World Bank – WGI
RQ	Regulatory Quality	Independent	Index ranging from -2.5 (low quality) to +2.5 (high quality)	World Bank – WGI
RL	Rule of Law	Independent	Index ranging from -2.5 (weak rule of law) to +2.5 (strong rule of law)	World Bank – WGI
VA	Voice and Accountability	Independent	Index ranging from -2.5 (low participation/freedom) to +2.5 (high participation/freedom)	World Bank – WGI
FDI_GDP	Foreign direct investment, net inflows (% of GDP)	Dependent	Net inflows of investment to acquire a lasting management interest (≥10% of voting stock) in an enterprise operating in an economy other than that of the investor, expressed as % of GDP	World Bank – WDI
GDP	GDP (current US$)	Control Variable	Total income earned through the production of goods and services in an economic territory during an accounting period, expressed in current US dollars	World Bank – WDI
GDP_PC	GDP per capita (current US$)	Control Variable	GDP divided by the total population, expressed in current US dollars	World Bank – WDI
INFL	Inflation, consumer prices (annual %)	Control Variable	Annual percentage change in the cost to the average consumer of acquiring a basket of goods and services (measured by CPI, base year 2015)	World Bank – WDI
TRADE_GDP	Trade openness (% of GDP)	Control Variable	Sum of exports and imports of goods and services measured as a share of GDP	World Bank – WDI

Source: Prepared by the researcher

III. Descriptive Statistics for Study Variables:

Table (2) summarizes the descriptive statistics of governance and economic indicators for the six Gulf Countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) over the period 2000–2023.

Table 2: Descriptive Statistics for Study Variables

Variable Code	Minimum Value	Maximum Value	Median	Mean
CC	-0.3601	1.5587	0.3516	0.4364
GE	-0.3919	1.6043	0.3756	0.4295
PS	-1.3354	1.2236	0.4608	0.3154
RL	-0.1654	0.9807	0.4651	0.4560
RQ	-0.1949	1.0966	0.4716	0.4593
VA	-1.9072	-0.2973	-1.0492	-1.0545
FDI_GDP	-2.7600	15.7509	1.6277	2.4617
GDP	9.06e+09	1.24e+12	1.18e+11	2.16e+11
GDP_PC	9754	108470	27835	35214
INFL	-4.8633	15.0501	2.1904	2.5016
TRADE_GDP	47.53	202.33	96.11	108.16

Source: Prepared by the researcher based on R software

1. Governance Indicators:

- The control of corruption (CC), government effectiveness (GE), rule of law (RL), and regulatory quality (RQ) show overall positive mean values (around 0.4–0.45), reflecting relatively strong governance performance compared to the global average;
- Political stability (PS) records a positive mean (0.31), but with a relatively wide range (min –1.33, max 1.22), indicating episodes of instability in certain periods or countries;
- Voice and accountability (VA) stands out with negative mean values (–1.05), showing structural weaknesses in political participation, civil liberties, and freedom of expression in the Gulf Countries.

2. Economic Indicators:

- GDP and GDP per capita are high, with average GDP reaching about 216 billion US dollars and per capita income exceeding 35000 US dollars, reflecting the strong economic position of Gulf Countries largely driven by oil and gas revenues;
- Trade openness (TRADE_GDP) shows a high average (108%), confirming the heavy dependence of Gulf economies on international trade;
- FDI inflows (FDI_GDP) have an average of 2.46% of GDP, with considerable variation (from –2.7% to 15.7%), reflecting fluctuations in foreign investment attraction policies and external conditions;
- Inflation (INFL) remains moderate on average (2.5%), but with significant peaks (up to 15%), suggesting exposure to global price volatility.

IV. Principal Component Analysis (PCA):

Principal Component Analysis (PCA) is a widely used multivariate statistical technique that allows for data reduction and dimensionality simplification, while retaining the maximum possible variance from the original dataset. In the context of this study, PCA is particularly useful for summarizing the six governance indicators published by the World Bank, Control of Corruption (CC), Government Effectiveness (GE), Political Stability and Absence of Violence (PS), Rule of Law (RL), Regulatory Quality (RQ), and Voice & Accountability (VA), into a smaller number of uncorrelated components. This not only helps to overcome potential multicollinearity among governance indicators but also facilitates the construction of a composite governance index that can be used in subsequent econometric modeling.

1. Data Suitability Tests for PCA:

Before applying Principal Component Analysis (PCA), it is necessary to test the adequacy of the data through Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. These two tests assess whether the correlation matrix is suitable for factor extraction.

Table 3: PCA Suitability Tests

Test		Statistic / Value	Interpretation
Kaiser-Meyer-Olkin (KMO) Overall MSA		0.77	Indicates a good level of sampling adequacy (above the 0.7 threshold).
KMO per Variable (MSA):	CC	0.78	Acceptable adequacy.
	GE	0.73	Acceptable adequacy.
	PS	0.75	Acceptable adequacy.
	RL	0.87	Very good adequacy.
	RQ	0.77	Acceptable adequacy.
	VA	0.64	Marginal adequacy but still usable.
Bartlett's Test of Sphericity		$\chi^2(15) = 581.94$, $p < 0.001$	Indicates that the correlation matrix is not an identity matrix, confirming suitability for PCA.

Source: Prepared by the researcher based on R software

The results of the data suitability tests confirm that the application of PCA is appropriate. The overall KMO value of 0.77 lies within the "good" range (0.70–0.80), indicating that the dataset is suitable for factor analysis. At the variable level, most governance indicators exhibit values above 0.70, with Rule of Law (0.87) showing the highest adequacy, while Voice and Accountability (0.64) records the lowest but remains within an acceptable threshold. Furthermore, Bartlett's Test of Sphericity is highly significant ($\chi^2(15) = 581.94$, $p < 0.001$), rejecting the null hypothesis that the correlation matrix is an identity matrix. Collectively, these results provide strong evidence of adequate sampling adequacy and sufficient intercorrelations among the six governance indicators, thereby validating the use of Principal Component Analysis (PCA) in this study.

2. Interpretation of PCA Results:

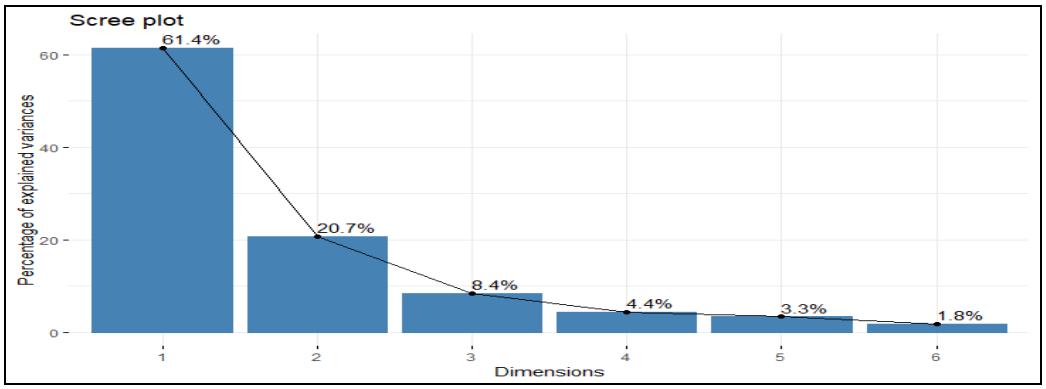
The results in Table (**4**) and Figure (**1**) highlight that the first two principal components (PC1 and PC2) together explain more than 82% of the total variance in the governance dataset, making them sufficient to capture the underlying structure of the six governance indicators.

Table 4: Eigenvalues and Variance Explained by Principal Components

Component	Eigenvalue	Percentage of Variance (%)	Cumulative Percentage (%)
PC1	3.6819	61.36	61.36
PC2	1.2426	20.71	82.07
PC3	0.5061	8.43	90.51
PC4	0.2617	4.36	94.87
PC5	0.1997	3.33	98.20
PC6	0.1080	1.80	100.00

Source: Prepared by the researcher based on R software

Figure 1: Scree Plot of the Principal Components for Governance Indicators



Source: Prepared by the researcher based on R software

As presented in Table (**4**), the first principal component (PC1) has an eigenvalue of 3.68, accounting for 61.36% of the total variance. The second component (PC2) has an eigenvalue of 1.24, explaining 20.71% of the variance. Combined, PC1 and PC2 represent 82.07% of the information contained in the governance dataset, while the remaining components contribute marginally (each less than 10%).

The contribution of each variable to the principal components is displayed in Table (**5**).

Table 5: Variable Loadings on Principal Components

Variable	PC1	PC2	PC3	PC4	PC5	PC6
CC	0.4722	-0.0427	0.3658	-0.4578	0.2876	0.5908
GE	0.4567	-0.3302	0.0784	-0.3640	0.0353	-0.7366
PS	0.3711	0.4637	0.5437	0.3345	-0.4776	-0.1081
RL	0.4674	0.0034	-0.2169	0.6381	0.5716	-0.0228
RQ	0.4127	-0.3705	-0.4846	0.0835	-0.6003	0.3004
VA	0.2049	0.7327	-0.5315	-0.3631	0.0287	-0.0771

Source: Prepared by the researcher based on R software

The results of the PCA indicate that the first principal component (PC1), which explains 61.36% of the total variance, is characterized by strong and positive loadings across almost all governance indicators, namely CC (0.4722), GE (0.4567), RL (0.4674), RQ (0.4127), and PS (0.3711), while VA (0.2049) also contributes positively, albeit more weakly. This clearly suggests that PC1 captures a broad and comprehensive "Governance Quality Index", integrating institutional strength, regulatory quality, rule of law, political stability, and anti-corruption effectiveness into a single, uncorrelated dimension. The second component (PC2), which accounts for 20.71% of the variance, is mainly shaped by Voice and Accountability (0.7327) and Political Stability (0.4637), isolating a distinct dimension of governance related to citizen participation, democratic freedoms, and political inclusion, while showing weaker or even negative contributions from other indicators. Taken together, these findings justify the reliance on PC1 as the representative index of governance in the subsequent panel econometric estimation: it alone captures more than 61% of the information in the dataset, integrates all governance dimensions positively, and eliminates the issue of multicollinearity. Hence, PC1 will be retained as the proxy for overall governance quality, while PC2 and higher-order components are considered secondary and thus discarded.

V. Data Processing and Unit Root Test:

Given the heterogeneity in the nature of the studied variables, the natural logarithm was applied to some of them (GDP, GDP_PC, and TRADE_GDP) in order to achieve greater homogeneity and reduce variance. Other variables were kept in their original form, such as inflation (INFL) and foreign direct investment inflows (FDI_GDP). As for the composite governance index (PCA1), obtained through principal component analysis, it was kept in its original form without logarithmic transformation, since it contains both positive and negative values.

Subsequently, the panel unit root test (Im-Pesaran-Shin, IPS) was applied to verify the stationarity of the time series for all variables.

Table 6: Results of the Im-Pesaran-Shin (IPS) Panel Unit Root Test

Variable	IPS Test Statistic	p-value	Decision	Interpretation
LGDP	-3.3536	0.0004	Stationary	The GDP (log-transformed) is stationary, indicating stable long-term growth dynamics.
LGDP_PC	-3.1353	0.0009	Stationary	GDP per capita (log-transformed) is stationary, reflecting consistent economic development among countries.
LTRADE_ GDP	-3.6523	0.0001	Stationary	Trade openness (log-transformed) is stationary, showing stable trade shares over time.

FDI_GDP	-1.7534	0.0398	Stationary	Foreign direct investment inflows (% of GDP) are stationary, meaning flows tend to converge to a stable average.
INFL	-2.5000	0.0062	Stationary	Inflation is stationary, reflecting long-term stability in price dynamics.
PCA1	0.9631	0.8323	Non-stationary	The composite governance index (PCA1) is non-stationary, requiring first differencing or an appropriate transformation before inclusion in econometric models.

Source: Prepared by the researcher based on R software

The results indicate that most variables (LGDP, LGDP_PC, LTRADE_GDP, FDI_GDP, and INFL) are stationary at their levels, making them suitable for direct inclusion in econometric models. In contrast, the governance index (PCA1) exhibits non-stationarity, suggesting the need for transformation or scaling before being incorporated into the Panel Quantile Regression framework.

To address this issue, the IPS panel unit root test was applied to the first difference of PCA1. The results are presented in the following table:

Table 7: Results of the Im-Pesaran-Shin (IPS) Panel Unit Root Test for the First Difference of PCA1

Variable	IPS Test Statistic	p-value	Decision	Interpretation
ΔPCA1	-4.3265	0.000007575	Stationary	The first-differenced governance index (ΔPCA1) is stationary, indicating that the variable stabilizes after first differencing and can be reliably included in the Panel Quantile Regression analysis.

Source: Prepared by the researcher based on R software

The results show that the composite governance index (PCA1), initially found to be non-stationary at level, becomes stationary after first differencing. The IPS statistic (-4.3265) with a highly significant p-value (0.000007575) confirms the rejection of the null hypothesis of non-stationarity, indicating that PCA1 is integrated of order one (I(1)). Consequently, after appropriate transformation or differencing, PCA1 can be safely included in the Panel Quantile Regression model alongside the other stationary variables without violating model assumptions.

VI. Panel Quantile Regression Estimation:

The Panel Quantile Regression (PQR) method represents a modern approach in econometrics that extends traditional regression techniques to panel data while allowing the analysis of conditional quantiles. Unlike classical panel regression, which estimates the average effect of explanatory variables on the dependent variable, PQR captures the heterogeneity of effects across the entire distribution. This is particularly useful in the context of Foreign Direct

Investment (FDI), where countries with low, medium, or high inflows may respond differently to governance indicators.

The method is robust to outliers, which are often present in financial and economic data, and provides a more comprehensive understanding of the relationship between governance and FDI. By focusing on quantiles rather than means, it offers insights into asymmetric effects and heterogeneity across countries, making it a preferred tool in recent empirical research.

In this study, PQR with country fixed effects was applied to examine the impact of the composite governance index (DPCA1) on FDI inflows in Gulf countries. The inclusion of fixed effects controls for unobserved country-specific characteristics, ensuring that the estimated effects of governance are not biased. The analysis was conducted across three quantiles (τ = 0.25, 0.50, 0.75) of the FDI distribution, highlighting how governance affects countries differently depending on their level of FDI.

This approach allows for a detailed assessment of the role of governance, along with other macroeconomic factors, in influencing FDI, providing policymakers with more nuanced evidence compared to traditional mean-based panel regressions.

Table 8: Panel Quantile Regression Results for Foreign Direct Investment (% of GDP) in Gulf Countries

Variable	Low FDI_GDP (τ = 0.25)		Medium FDI_GDP (τ = 0.5)		High FDI_GDP (τ = 0.75)	
	Value	P-value	Value	P-value	Value	P-value
(Intercept)	13.582	0.12074	39.350	0.00175 ***	40.196	0.00001 ***
DPCA1	0.132	0.77830	0.184	0.78103	1.110	0.01561 **
LGDP	-0.725	0.22500	-1.133	0.18036	-2.410	0.00005 ***
LGDP_PC	2.184	0.04629 **	0.625	0.68418	4.998	0.00001 ***
LTRADE_GDP	-3.139	0.00363 ***	-2.663	0.07737 *	-5.212	0.00000 ***
INFL	0.089	0.04343 **	0.156	0.01287 **	0.181	0.00004 ***
COUNTRY: Bahrain	2.326	0.10668	1.148	0.57121	2.500	0.07325 *
COUNTRY: Kuwait	-0.401	0.69269	-2.180	0.13051	-0.866	0.37849
COUNTRY: Oman	0.677	0.40613	-0.939	0.41510	2.346	0.00344 **
COUNTRY: Qatar	-3.448	0.00317 ***	-2.771	0.08928 *	-5.295	0.00001 ***
COUNTRY: Saudi Arabia	0.733	0.53492	-0.390	0.81521	3.074	0.00797 **
Note: United Arab Emirates is the reference country for the fixed effects						

Source: Prepared by the researcher based on R software

Table 8 presents the estimation results of the Panel Quantile Regression at the three quantile levels (25th, 50th, and 75th percentiles) for FDI inflows (FDI_GDP) across Gulf Countries, highlighting both the magnitude and statistical significance of the explanatory variables, including macroeconomic factors and the composite governance index (DPCA1).

VII. Statistical and Economic Interpretation of Panel Quantile Regression Results:

1. Statistical Interpretation:

At the 25th quantile (low FDI inflows):

- Governance (DPCA1) is positive but not significant;
- GDP (LGDP) is negative and not significant;
- GDP per capita (LGDP_PC) is positive and significant at the 5% level;
- Trade openness (LTRADE_GDP) is negative and highly significant;
- Inflation is positive and significant at the 5% level;
- Country effects: Qatar is negative and significant, while Bahrain, Kuwait, Oman, and Saudi Arabia are not significantly different from the UAE.

At the 50th quantile (median FDI inflows):

- Governance (DPCA1) remains positive but insignificant;
- GDP and GDP per capita are both insignificant;
- Trade openness is negative and marginally significant;
- Inflation is positive and significant at the 5% level;
- Country effects: Qatar shows a negative marginally significant effect, while the other Gulf countries are not significantly different from the UAE.

At the 75th quantile (high FDI inflows):

- Governance (DPCA1) becomes positive and significant at the 5% level;
- GDP is negative and highly significant;
- GDP per capita is positive and highly significant;
- Trade openness is negative and highly significant;
- Inflation is positive and highly significant;
- Country effects: Oman (positive and significant), Qatar (negative and highly significant), and Saudi Arabia (positive and significant), while Bahrain and Kuwait are insignificant compared to the UAE.

2. Economic Interpretation of Control Variables:

2.1. GDP (LGDP):

- Negative and significant only at the upper quantile;
- This implies that as Gulf economies grow larger, they may rely less on FDI as a share of GDP, consistent with the idea of reduced relative dependence on external capital at advanced stages of development.

2.2. GDP per capita (LGDP_PC):

- Significant and positive at low and high quantiles, but not at the median;

- This highlights that purchasing power and consumer market size matter most when FDI is scarce or abundant, reflecting both market-seeking and high-return opportunities.

2.3. Trade openness (LTRADE_GDP):

- Consistently negative and highly significant at low and high quantiles;
- This counterintuitive result suggests that Gulf countries with higher trade integration may depend less on equity-based FDI, possibly relying more on trade agreements and portfolio flows rather than direct equity inflows.

2.4. Inflation (INFL):

- Positive and significant across all quantiles, with increasing strength at higher inflows;
- Rather than reflecting instability, this may indicate that moderate inflation is associated with active domestic demand, which in turn attracts foreign investors.

2.5. Country Fixed Effects:

- Qatar consistently shows a negative and significant effect, indicating that, relative to the UAE, it attracts systematically lower FDI inflows;
- Oman and Saudi Arabia show positive and significant effects at the high quantile, suggesting that these countries become more attractive to foreign investors once inflows reach high levels;
- Bahrain and Kuwait are not significantly different from the UAE, implying convergence in their FDI dynamics.

3. Economic Interpretation of Governance:

The results reveal that governance, as captured by the first principal component (DPCA1), is statistically insignificant at both the low ($\tau = 0.25$) and median ($\tau = 0.50$) levels of FDI inflows, but becomes strongly positive and significant at the high quantile ($\tau = 0.75$). From a statistical perspective, this finding highlights the heterogeneous impact of governance across the distribution of FDI: institutional quality does not appear to play a decisive role when countries are struggling to attract foreign capital or when they are positioned at intermediate levels of inflows. Instead, its relevance becomes evident only in the upper tail of the distribution, where countries are already receiving substantial amounts of FDI.

Economically, this implies that good governance functions less as a catalyst for initiating investment flows and more as a reinforcing mechanism for sustaining and scaling them. In the Gulf context, this may be explained by the fact that foreign investors entering markets with initially low FDI are often

driven by natural resources, geographic advantages, or short-term profit opportunities, rather than institutional quality. At this early stage, governance reforms may not be sufficient to outweigh structural factors or high entry risks. However, once a country reaches a certain threshold of FDI attractiveness, such as strong infrastructure, integration into global markets, and a visible presence of multinational firms, governance improvements become critical. Enhanced regulatory quality, transparency, contract enforcement, and reduced corruption not only protect existing investors but also signal long-term stability and predictability, thereby encouraging reinvestment and the entry of larger, more sophisticated investors.

This result aligns with the literature on "threshold effects" in governance, suggesting that institutional quality exerts a conditional impact: its benefits materialize only after economies have achieved a minimum level of international integration and investor confidence. In Gulf countries, where institutional reforms have been uneven, this explains why governance does not significantly influence FDI in lagging contexts but emerges as a decisive factor in countries that are already FDI hubs. In such cases, governance acts as a competitive advantage, enabling these countries to retain their attractiveness in an increasingly competitive global investment landscape.

VIII. Conclusion:

This study investigated the impact of governance on Foreign Direct Investment (FDI) inflows in Gulf countries during the period 2000–2023, relying on a composite governance index constructed through Principal Component Analysis (PCA) and estimated within a Panel Quantile Regression framework. The methodological approach proved particularly relevant as it captured the multidimensional nature of governance and its heterogeneous effects across the distribution of FDI inflows. The main findings reveal that governance exerts a decisive influence: at lower quantiles, stricter regulations and institutional requirements may increase compliance costs and discourage short-term inflows, while at higher quantiles, strong institutional quality, political stability, effective regulations, and the reduction of corruption emerge as fundamental drivers for sustaining long-term investments. These outcomes confirm the central hypothesis that governance is a key determinant of FDI dynamics in Gulf countries, rejecting the idea of a neutral or marginal effect.

From a broader perspective, the results highlight the dual nature of governance reforms in resource-dependent economies. While such reforms may initially create adjustment costs and deter opportunistic investors, they are ultimately indispensable for reducing uncertainty, fostering transparency, and

ensuring credibility in the international investment environment. Therefore, governance should not be seen as an accessory factor but rather as a cornerstone for building resilient, diversified, and investment-friendly economies in the Gulf region.

Based on these insights, the following recommendations are proposed:

- Strengthen institutional quality and political stability to foster long-term investor confidence;
- Ensure regulatory frameworks that balance compliance requirements with business facilitation;
- Enhance transparency and anti-corruption mechanisms to reduce uncertainty for foreign investors;
- Implement gradual and balanced reforms to avoid deterring short-term inflows while preparing for sustainable investments;
- Align governance reforms with broader economic diversification strategies to reduce dependence on resource rents;
- Promote regional cooperation among Gulf countries to harmonize governance practices and create a more attractive investment environment.

Future research may extend this analysis by incorporating additional financial, institutional, and geopolitical variables, or by applying dynamic panel approaches to capture long-term adjustment mechanisms, thus enriching our understanding of how governance reforms can effectively promote sustainable FDI inflows and economic resilience in the Gulf region.

IX. Bibliography List:

- Kaufmann, D. K. (2010). *The worldwide governance indicators: Methodology and analytical issues.* World Bank policy research working paper, (pp. 30-54).
- Tawfiq, R. (2005). Good Governance and Development in Africa: An Analytical Study of the NEPAD Initiative. *Institute of African Research and Studies, (Vol. 1)* .
- UNESCAP. (2009). *What it is Governance?* Retrieved 06 01, 2025, from http://www.unescap.org/sites/default/files/good-governance.pdf
- World Bank Indicators. (2025). *World Bank Indicators*. Retrieved 07 01, 2025, from https://data.albankaldawli.org/indicator
- World Bank. (1991). *Managing Development: The Governance Dimension.* Retrieved 06 01, 2025, from https://documents1.worldbank.org/curated/en/884111468134710535/pdf/34899.pdf
- Worldwide Governance Indicators. (2025). *Worldwide Governance Indicators*. Retrieved 07 01, 2025, from https://databank.worldbank.org/source/worldwide-governance-indicators#