

Journal homepage: http://iieta.org/journals/ijsdp

# Navigating the Classical Relationship Between Foreign Direct Investment and Economic Growth: A Case of Saudi Arabia

Farrukh Nawaz Kayani<sup>\*</sup>, Osamah Alzaid

Faculty of Business Studies, Arab Open University (AOU), Riyadh 11681, Saudi Arabia

Corresponding Author Email: f.kayani@arabou.edu.sa

Copyright: ©2024 The authors. This article is published by IIETA and is licensed under the CC BY 4.0 license (http://creativecommons.org/licenses/by/4.0/).

https://doi.org/10.18280/ijsdp.191120

# ABSTRACT

Received: 12 September 2024 Revised: 11 October 2024 Accepted: 12 October 2024 Available online: 28 November 2024

Keywords: ARDL bounds test, capital formation, inward FDI, economic growth, Saudi Arabia Inward Foreign Direct Investment (FDI) and economic growth possess a very central and pivotal importance in the economic development of any country. Keeping this in view, Saudi Arabia is also trying to attract more FDI like other transition economies. By the end of 2023, over 200 international firms have shifted their headquarters to Riyadh as the Kingdom had announced previously that foreign firms with their Middle Eastern bases outside of Saudi Arabia would not be able to bid for Saudi Government contracts. This smart move surely would help the Saudi economy to attract more FDI as compared to the other gulf neighboring countries. In this article, we have examined the impact of FDI on the economic growth of thriving Saudi Arabia. We took the annual time series data for the dependent variable and the explanatory variables for the period ranging from 1991 to 2022. To explore the long-run relationship among the variables we used Auto regressive distributed lags (ARDL) Bounds test. The empirical findings revealed the existence of a long-run relationship among the variables of the model, but we found an insignificant impact of FDI on economic growth. These insights offer valuable implications for policymakers aiming to optimize the economic impact of FDI in Saudi Arabia.

# **1. INTRODUCTION**

The most important component of global capital flows is FDI, it serves as a significant instrument in fostering the economic development of any country. The developing nations have used foreign direct investment as a strategic mechanism to address their economic challenges [1]. Moreover, attracting FDI is an important strategy of emerging nations to augment the capital accumulation, hence fostering the rates of gross domestic product (GDP) [2]. The patterns of FDI inflows and the trajectory of fixed capital investment exhibit distinct but interconnected trajectories. The dissemination of the consequences of FDI may be achieved via the provision of technical support and the enhancement of skills development [3]. This facilitates the participation of local enterprises in value chains that optimise their integration into the global economy. The aggregate amount of FDI inflows serves as a limited predictor of the prospective profitability for the host country [4]. There is widespread agreement on the possible advantages that are connected to FDI; despite this, the implementation of FDI is not a uniform procedure.

FDI is a powerful catalyst for development and a crucial component of a free and competitive global monetary system. Nevertheless, FDI's benefits do not accrue in the same way for all countries and local groups [5]. Attracting additional countries to FDI and reaping the full benefits of FDI for development requires a combination of national methods and

universal investment rules. Thus, the host countries mainly face the challenges, which need to design a straightforward and practical investment empowerment plan and combine the necessary human and institutional resources to make it a reality [6]. FDI has often been hailed as a boon to national economies. Policymakers in low-wage nations have given it a lot of thought because of how well it copes with a lack of financial assets and ability. Although FDI is essential, it has been steadily declining over time, both to and from poor countries. This drop suggests that the difficulty of getting FDI has increased, even as developing nations work to foster an environment conducive to drawing in investors from outside [7].

As part of its Vision 2030 programme, the Saudi Arabian government has set a goal of diversifying the country's economy to lessen the country's reliance on the oil sector [8]. FDI influx is a significant tool that has been suggested to expedite this process. There are several methods in which it provides direct benefits to the recipient economies. The results of a significant quantity of academic research suggest that FDI may be an effective strategy for promoting economic growth and development in several different countries [9]. Moreover, the influx of FDI has a crucial role in enhancing public welfare via the creation of job opportunities and the development of labour expertise [10]. Significantly, FDI serves as a conduit for facilitating the transfer of modern technology to the recipient nation, hence contributing to the overall improvement of its economic development [11]. One significant benefit of FDI is its ability to enhance global market competitiveness, hence stimulating productivity within the economy of the receiving country.

The influx of FDI in the economy of Saudi Arabia is determined by a specific equation that is shaped by the distinctive national characteristics of the country. The substantial income generated by oil resources enables the government to make substantial contributions to a greater proportion of the economy, resulting in the concentration of economic activities within a limited number of key businesses. Considering the economic significance of FDI, the nation implemented a range of strategies, one of which was obtaining membership in the World Trade Organization (WTO) [12]. Following its entrance to the WTO in December 2005, the economy saw a substantial influx of foreign direct investment, even throughout the global financial crisis (GFC) that occurred between 2008 and 2009 [13]. This influx of FDI was in stark contrast to the slow inflows seen by many wealthy nations during the same period. The procedure of becoming a member of the WTO has implications for FDI, both directly and indirectly. The direct consequences include the promotion of foreign companies' investments in WTO member nations, which are distinguished by the lessening of trade barriers like tariffs, import quotas, and other laws [14]. Indirect consequences include the amplification of political globalisation, resulting in later enhancements in national political institutions.

Existing scholarly research posits a relation between FDI and the quality of institutions, with high-quality institutions serving as an indicator of government stability [15]. Numerous empirical research has provided evidence supporting the notion that political instability has a negative influence on FDI. According to the findings of [16], the quality of institutions has a crucial role in attracting foreign direct investment, with a particular emphasis on economic institutions such as property rights and contract enforcement. According to ketiah-Amponsah and Sarpong [17], improving the "ease of doing business" measure is increasingly seen as a critical aspect in attracting increased FDI to emerging countries. This assertion is based on the authors' observation that this recognition has been growing over the last several years. The conclusions of an investigation carried out by the writers provide the foundation for this acknowledgment. The Saudi Arabian economy has developed into an enticing centre for FDI as a direct consequence of the nation's stable political and economic climate. This has led to an increase in the amount of FDI that has been invested in the country even during the height of the GFC.

The analysis of the connection between inward FDI and the growth of the Saudi Arabian economy has resulted in the production of several notable research papers. Scholars have conducted thorough examinations about the patterns and trends in foreign direct investment inflows, providing valuable insights into the diverse effects of foreign investments on many sectors of the Saudi Arabian economy. A noteworthy contribution pertains to the identification of crucial sectors that exhibit the highest level of responsiveness to Inward FDI. This comprehension offers significant insights for policymakers and investors, enabling them to strategically use foreign capital to foster economic development in targeted regions. In addition, academics have conducted exhaustive research on the complex factors that influence the connection between inward FDI and economic growth in the context of Saudi Arabia. The effect of FDI is influenced by many factors, including regulatory frameworks, political stability, and market circumstances. These factors have been extensively analysed to provide a full understanding of their role in influencing the impact of FDI. This comprehensive knowledge may contribute to the development of specific initiatives aimed at attracting and maintaining foreign the investments.

The use of empirical analysis and statistical models has made a significant contribution to the quantitative evaluation of the correlation amongst Inward FDI and economic development. The results not only contribute to theoretical understanding, but also bolster the research's credibility via the inclusion of actual data. Policymakers may use the quantitative findings to inform evidence-based decision-making processes that are oriented towards fostering a favourable climate for foreign investments. In summary, the investigation of the correlation between Inward FDI and economic development in Saudi Arabia has enhanced our comprehension of the intricate mechanisms involved. Researchers have contributed significant information to policymakers by identifying critical sectors, investigating influential variables, assessing temporal dynamics, and presenting empirical data. This knowledge aims to support the development of a more sustainable and successful economic future for the Kingdom. The primary objective of this research study is to conduct a detailed examination of the correlation between Inward FDI and the economic development of Saudi Arabia. The introduction section serves as a contextual framework, elucidating the importance of the study and introducing the research themes. The research also makes use of empirical studies and statistical models to conduct a statistical evaluation of the link between inward FDI and economic growth.



Figure 1. Inward FDI & GDP growth

In Figure 1, we can observe a relatively consistent path in case of inward FDI. Overall, inward FDI started to increase from 2004 onwards and the highest inward FDI was observed at 3.59 % in 2016. The remainder of the paper is organized as follows. The Section 2, we talked about the existing literature review, Section 3 refers to the data and methodology. The Section 4 provides a summary of the main results. Finally, the Section 5 comprises of conclusion and future directions.

# 2. LITERATURE REVIEW

The FDI contributes to the advancement of local economies via various means; FDI contributes to the improvement of public welfare via the augmentation of employment possibilities and the advancement of labour development. Furthermore, FDI serves as a crucial mechanism for transferring sophisticated technology from source nations to host countries, hence facilitating technical progress and fostering economic growth in the latter [18]. FDI can be considered as one of the major driving forces behind GDP growth, and it also acts as a means for transferring the latest technologies to the host countries [19-22]. However, it should be noted that the mere presence of economic openness and efforts to attract foreign capital does not always ensure the inflow of FDI. This is because FDI also considers the crucial factor of economic stability in the host nations. To get advantages from FDI, it is necessary to have a well-structured implementation strategy and establish supportive investment policies. An increasing body of research emphasises the need to examine crucial factors that influence the influx of FDI in individual nations.

The existing body of research posits that there are many characteristics that contribute to the attraction of FDI. The components included in this context are natural resources, cost-effective labour, favourable exchange rates, institutional integrity, governance, and economic liberty. It is essential to keep in mind that these aspects are not generally applicable and instead are specific to each nation [23]. The level of institutional quality is a significant factor in the attraction of FDI. Institutional changes have the capacity to generate interest from foreign investors due to their potential to provide safeguards and mitigate risks associated with political and governmental stability [24]. The studies conducted by Ross [25], and Bouchoucha and Yahyaoui [26] provide evidence that governance infrastructure has a significant positive impact on FDI inflows. The process of joining the World Trade Organisation (WTO) and its impact on foreign direct investment is also important to be discussed. The accession to the WTO might potentially have various effects on the economy of nations. Direct effects of membership in a regional trade agreement include the reduction of trade obstacles with fellow member states, as well as the alignment of several rules with those of other participating nations. The indirect ramifications include increased political internationalisation [27]. The entrance to the WTO is seen to have the potential to enhance the business environment, institutional standards, and transparency of governments, hence leading to a reduction in corruption within national economies [28].

Global Financial crisis and COVID-19 have seriously threatened the economic growth of different countries [29]. Saudi Arabia has some notable characteristics that have facilitated its economy in attracting a greater influx of FDI, even during the Global Financial Crisis (GFC). According to Alnaqbi et al. [30], the Arab World saw notable advantages because of the elevated energy costs seen during this specific time frame. The available anecdotal data indicates that the primary Arab nations involved in oil and gas production, namely Algeria, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, have seen increased economic development by enhancing their foreign assets' value which have been invested in global markets. Moreover, the economies of Arab nations demonstrated a greater level of resilience in the face of the GFC because of increased inflows of remittances. According to a study by Calero and Turner [31], it is evident that tourism plays an important role in the economic development of many regions. Specifically, the statistics were presented for Arab nations, Sub-Saharan Africa, South and East Asia, and Latin America. In addition, it is worth noting that Arab nations get a significant proportion of the overall global development aid. These countries also obtained a large amount of foreign assets, amounting to more than USD 2500 per capita, which is notably higher than the amount received by the rest of the poor world, which was less than USD 1500 [32]. Arab nations, as shown by the International Monetary Fund (IMF), had comparatively superior performance in relation to the worldwide average amongst the GFC.

The Middle East and North Africa (MENA) area has distinctive characteristics regarding foreign direct investment (FDI) inflows, such as significant fluctuations and a notable concentration both at the national and sectorial levels. The area had an increased influx of FDI between 2000 and 2008, which may be attributed to the implementation of structural and institutional enhancements. Notably, these improvements persisted even during the GFC. Most of the foreign investment in the Middle East and North Africa (MENA) region is concentrated in a select few countries, namely Saudi Arabia, Turkey, and the United Arab Emirates (UAE). These countries have accounted for 60% of the total FDI inflows into the region since 2000, as reported by the United Nations Conference on Trade and Development (UNCTAD) in 2018 [33]. Following these countries, Egypt, Lebanon, Morocco, and Qatar have also attracted significant FDI inflows. According to Dimitrova et al. [34], it is evident that nations in the MENA area have seen various advantages because of FDI, and their proportionate allocation has remained consistent when compared to other global regions.

The Saudi Arabian economy has a highly competitive landscape across several economic sectors, the Kingdom constitutes around 25% of the Gross Domestic Product (GDP) of the Arab region and boasts the most substantial deposits of oil. Furthermore, there are no limitations enforced on foreign currency exchange, international fund transfers, as well as the movement of capital and overseas profit transfers. The Kingdom of Saudi Arabia's present investment climate is characterised by many significant aspects that serve as attractions for international investment [35]. Firstly, the Saudi Vision 2030 was introduced with the aim of diversifying and enhancing the competitive capabilities of the economy. Secondly, the Kingdom has a comprehensive and interconnected infrastructure, along with a strategically advantageous geographical position that serves as a nexus connecting the three continents. Additionally, it boasts the biggest port on the Red Sea, which facilitates around 80% of the region's marine activity [36]. The Kingdom is distinguished by a youthful and proficient labour force, consisting of around 32.5 million individuals, half of whom are classified as young adults. Additionally, the presence of a prominent financial sector characterised by a robust monetary system and a well-functioning banking industry is a crucial factor. The Vision 2030 initiative has significant prospects for international investment in several areas, including education, housing, energy, and health, amongst others. Furthermore, the nation has granted approval for foreign investors to obtain 100% ownership of assets in the retail and wholesale trade industries, therefore eliminating conventional protectionist restrictions that were previously imposed [37].

The increased inward flow of foreign direct investment (FDI) leads to higher levels of economic growth [38, 39]. The Saudi government is also trying to encourage FDI in areas such as entertainment, which have significant future growth prospects. Based on the findings of Jadwa Investment, it was observed that in 2016, Saudi Arabia allocated around SAR100 billion towards the development of its tourism sector. Out of this amount, SAR31 billion was specifically allocated for entertainment purposes. This allocation signifies the

increasing desire for entertainment and tourism among the populace, which is projected to reach a population of 40 million individuals by the year 2030 [40]. Additionally, there has been foreign direct investment (FDI) in areas like renewable energy, which aligns with the major objective of the government to diversify its economy. This has resulted in the initiation of new projects outside the traditional oil and gas industry [41]. As indicated previously, FDI typically yields advantages and expertise for recipient nations. In the context of Saudi Arabia, these benefits encompass managerial proficiencies, technological knowledge, job creation, capacity enhancement, and the establishment of a robust competitive landscape. These outcomes align with the objectives of Vision 2030, particularly in terms of diversifying non-oil exports.

A search on Google Scholar for articles titled "FDI and Growth" or "Foreign Direct Investment and Growth" returns over 1,000s of publications, many of which have even received thousands of citations. Despite the extensive literature on this subject, a definitive answer to whether FDI fosters economic growth remains elusive. There are several potential reasons for this. First, the positive impact of FDI on GDP growth might not actually exist. Second, while such an effect may be present, it could be too small to be detected at the macro level. Third, measurement errors could undermine the estimated relationship between FDI and growth. It is misleading to assert that all FDI has a positive, negative, or negligible impact on economic growth based on the assumption that all FDIs are of equal quality. Given that each FDI varies in its capacity for investment absorption, technological foundation, and legal context, it cannot be assumed that all FDIs have the same economic effect. This paper re-examines the relationship between FDI and economic growth in the case of KSA.

FDI in Saudi Arabia has expanded dramatically since 2005, with interest and investment speeding up following the country's WTO entrance that year [42]. The key sectors that were responsible for the increase in FDI in Saudi Arabia in 2008 were the real estate market, the petrochemical industry, the refining industry, the construction industry, and the commercial sector. Up to September 2008, a jump in the amount of FDI was caused by many factors, including the persistent rise in prices of oil, the continuation of economic expansion, and the proliferation of large-scale development projects (UNCTAD, 2019). Many nations see the attraction of direct foreign investment as an essential factor in the formulation of sound socioeconomic policies, and as such, they place a high priority on the promotion of such investment [43]. An influx of foreign direct investment is widely acknowledged to be a key source of production inputs such as capital, technology, knowledge, and networks, according to a consensus held by most experts.

# 3. THEORETICAL FRAMEWORK AND METHODOLOGY

The exogenous growth theory, commonly known as the neo-classical growth model or the Solow-Swan model, was introduced by Solow in the mid-1950s [44, 45]. This framework posits that economic growth arises primarily from the accumulation of external factors of production, specifically capital and labor. Research utilizing this exogenous model often applies to the aggregate production function formulated by Cobb and Douglas [46]. The Cobb-Douglas production function analyzes the impacts of capital inputs (both domestic

and foreign), labor inputs, and varying rates of technological advancement over time. This approach illustrates that capital accumulation directly influences economic growth in line with its share of national output. Additionally, economic growth is reliant on labor force expansion and technological improvements.

According to the theory, FDI enhances the capital stock of the host nation, subsequently influencing its economic growth. De Jager [47] notes that if FDI brings new technologies that boost labor and capital productivity, it can result in more stable investment returns, leading to an increase in labor force growth. Research by Barro and Sala-I-Martin [48] confirmed a positive correlation between capital accumulation and output, while Herzer and Klasen [49] found that FDI encourages economic growth by enhancing domestic investment. Through the lens of the neo-classical growth model, it is evident that FDI affects economic growth by facilitating capital accumulation and integrating new inputs and foreign technologies into the production processes of the host country. Therefore, this model illustrates how FDI fosters economic growth by enhancing both the quantity and efficiency of investments within the host nation.

## **3.1 Data and variables**

We took GDP as the dependent variable. The Saudi GDP per capita was highest in the year 1991 (10.52 %) and lowest in the year 2009 (-5.62) most likely because of the global financial crisis. We took inward FDI as % of GDP (FDI) & gross capital formation (CFM) as independent variables. We took the annual time series data from 1991 to 2022 from World Development Indicators. The further details about the dependent and independent variables are shared below in Table 1.

Table 1	Data and	variables	descri	ntion
Labic 1.	Data and	variables	acseri	puon

Variables	Symbols	Description & Measurement Scale	Data Source
Economic Growth	GDP	GDP per capita growth (annual %)	WDI, 2024
Foreign Direct Investment	FDI	Foreign direct investment, net inflows (% of GDP)	WDI, 2024
Capital Formation	CFM	Gross capital formation (% of GDP)	WDI, 2024

## **3.2 Econometric model**

In this study we are aiming to gauge the impact of inward FDI upon the economic growth of Saudi Arabia. GDP per capita growth is dependent upon Inward FDI & Gross Capital Formation. Gross capital formation is a crucial element of economic growth. Solow argues that the accumulation of physical capital enhances production levels, thereby driving economic growth. Capital accumulation influences a nation's production capacity and, consequently, its economic growth. We took the data from World Development Indicators for the years ranging from 1991 to 2022; the data for the last few years wasn't available. It is important to mention that ARDL bounds test yields good results in case of small datasets.

$$GDP_t = (FDI_t, CFM_t)$$
(1)

The general model to be estimated is shared below

$$GDP_t = b_0 + b_1 FDI_t + b_2 CFM_t + e_t$$
(2)

where,

GDP = GDP per capita growth (annual %)

FDI = Inward Foreign Direct Investment (% of GDP)

CFM = Gross Capital Formation (% of GDP)

t = Time from 1991 - 2021

 $e_t = Error term.$ 

For determining the long-run relationship, the following Auto regressive Distributed Lag Model equation would be estimated.

$$GDP_{t} = b_{0} + b_{1}GDP_{t-1} + b_{2}FDI_{t-1} + b_{3}CFM_{t-1+} e_{t}$$
(3)

where, GDP<sub>t</sub> is the GDP per capita growth from 1991 to 2021. Whereas  $b_1$ ,  $b_2$  &  $b_3$  are the long-run coefficients and  $e_t$  is the error term. We apply ARDL cointegration when the variables have mixed levels of integration. But if any of the variables is I(2), then we cannot apply ARDL Bounds test as the calculated F-Statistics becomes invalid if any of the series is integrated of order I(2) or higher. The ARDL bounds test is used to estimate the long-term relationship between variables in a model. Additionally, the co-integration test addresses the issue of spurious regression. Traditional tests for time series data, such as those by Engle and Granger [50], and Johansen [51], were only applicable when the variables were integrated in the same order. However, their inability to handle variables integrated at different orders led to the development of the ARDL co-integration model by Pesaran and Shin [52], and Pesaran et al. [53].

# 4. EMPIRICAL RESULTS AND DISCUSSION

#### **4.1 Descriptive Statistics**

For preliminary analysis, we calculated the descriptive statistics, and the results about the means, median standard deviation, minimum, and maximum values are reported in Table 2.

Table 2. Summary statistics for the selected variables

Variables	Mean	Median	Maximum Value	Minimum Value	<b>Standard Deviation</b>
GDP	0.481657	0.208490	10.52262	-6.223399	4.159487
FDI	0.615980	0.367201	3.296522	-1.307818	1.080323
CFM	24.49100	25.05497	34.22352	18.57130	4.510753

#### 4.2 Augmented dickey fuller (ADF) unit root test

Dickey and Fuller [54] proposed an augmented dickey fuller (ADF) unit root test to check the stationary of variables. The main purpose of checking the stationary of variables is to make sure that none of the variables is integrated at the second difference I(2). After applying for the ADF test we found that our variables are stationary at level and 1<sup>st</sup> difference. The results of the ADF test have been shared below in Table 3.

Table 3. Results of ADF

Variables	Symbol	ADF (Level)	ADF (1 <sup>st</sup> Difference)
GDP per capita Growth	GDP	Stationary	N/A
Inward Foreign Direct Investment	FDI	Stationary	N/A
Gross Capital Formation	CFM	Non- Stationary	Stationary

# 4.3 ARDL bounds test

 Table 4. ARDL bounds test results

Test Statistics	Value	K
F-statistics	9.273469	2
Critical Value	Bounds	
Significance Level	I(0)	I(1)
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

The ARDL bounds test is used to find the long-run relationship among the variables of a model. The long-run relationship among the variables is detected through the F-statistic (Wald test). Table 4 represents the results of ARDL

bounds test, it can be noted that the F-statistics value is greater than both the lower as well as the upper bound value at 10%, 5%, 2.5%, and 1% significance levels, so we can say that cointegration exists among the variables of our model.

#### 4.4 ARDL long-run estimates

Table 5. ARDL	long-run resul	lts
---------------	----------------	-----

Variables	Coefficient	Standard	Т-	P-
		Error	Statistics	Value
FDI	0.760841	0.741452	1.026150	0.3139
CFM	-0.024262	0.188146	-0.128952	0.8984
	Note: Indep	pendent variables	s = FDI,	
	CFM & EXP,	Dependent varia	ble = GDP	

After employing unit root tests (ADF), we applied the Autoregressive Distributed Lag model (ARDL) to investigate the long-run relationships between the dependent & independent variables (GDP, FDI, CFM). Table 5 represents the results generated from applying the ARDL approach. FDI and capital formation have insignificant negative impacts upon economic growth. An insignificant causal relationship can be empirically observed between foreign direct investment (FDI) and economic growth. Perhaps this relationship stems from the Saudi Arabian economy's heavy reliance on hydrocarbon resources, which drive its growth. The impact of FDI remains limited, as the economy is still in the early stages of liberalization efforts. The government has initiated Vision 2030 to decrease its dependence on oil, which is expected to boost the contribution of FDI in economic growth.

#### 4.5 Normality test

Jacque Berra test is used to check the normality of the residuals. The p-value shows the normality of the residuals (refer to Figure 2).



Figure 2. Normality test

#### 4.6 Stability diagnostic test

For gauging the stability of the long-run model we used the cumulative sum and cumulative sum of square test of recursive residuals. Figures 3 and 4 represent the results of cumulative sum and cumulative sum of square tests respectively. Results clearly indicate that the statistics of both cumulative sum and cumulative sum of square test are lying within the interval bands of 5 per cent confidence interval.



Figure 3. Cumulative sum of recursive residuals



Figure 4. Cumulative sum of squares of recursive residuals

# 4.7 Granger causality test

We use Granger causality test for gauging the direction of causality between the variables. The direction of the relationship could be a unidirectional, bidirectional or noncausal relationship. Unidirectional causality takes place when there is only a one-way relationship between the variables; for instance, either GDP is the only granger causing FDI or in the other way FDI is only granger causing GDP. The bidirectional causality takes place when a two-way relationship between the variables is determined; GDP is granger causing FDI & FDI is granger causing GDP. Finally, no causality would take place when neither the GDP is granger causing the FDI nor the FDI is granger causing the GDP. As per Table 6 we did not find causality between the variables.

Variables	<b>F-Statistics</b>	P-Value	Causality
FDI - GDP	0.45790	0.5042	No
GDP - FDI	0.27066	0.6070	No
CFM - GDP	0.65753	0.4243	No
GDP - CFM	2.68421	0.1125	No
CFM - FDI	1.31945	0.2604	No
FDI - CFM	1.23435	0.2760	No

# **5. CONCLUSIONS**

This study investigated the impact of FDI on the economic growth of Saudi Arabia by employing annual time series data for the period 1991-2022. The autoregressive distributed lagbound testing cointegration approach confirmed the long-run relationship among the variables of the model. The results showed that FDI & capital formation has an insignificant impact upon economic growth. It is an open secret that FDI positively influences the sustainable prosperity of the host nation. Foreign investments are believed to have a significant impact on the country's economic development. The favorable effects of FDI on labor, products, capital markets, and technology contribute to its attractiveness in emerging economies. Additionally, FDI is considered a vital source of revenue generation through advancements in technology, management skills, market knowledge, governance, and capital influx. To maximize economic development through substantial FDI inflows-especially during transitional phases-it is crucial to implement supportive policies. Promoting and increasing FDI is essential to harness a variety of potential drivers for economic growth.

In 2016, Saudi Arabia launched its Vision 2030 program aimed at diversifying the economy away from oil dependence, fostering private-sector growth, enhancing female workforce participation, and reducing unemployment among citizens. The program includes a goal of attracting \$100 billion in FDI annually by 2030 to stimulate non-oil GDP and aims to increase FDI to 5.7% of GDP by the end of the decade and to position the Kingdom among the world's 15 largest economies by 2030. It is important to mention that over 200 international firms (including healthcare, energy, technology & hospitality) have shifted their headquarters in Riyadh by the end of 2023 as the Kingdom had announced previously that foreign firms with their Middle Eastern bases outside of Saudi Arabia would not be able to bid for the Saudi Government contracts. This smart move would surely help the Saudi economy to attract more FDI as compared to the other gulf neighboring countries. This study has a limitation in that it covered only Saudi Arabia from the GCC; future studies can cover the other GCC countries as well. Furthermore, a focus on the sectoral level could enhance empirical research on the link between FDI and economic growth by utilizing sector-specific panel data. Insights gained from examining this relationship could offer valuable guidance to policymakers, helping them develop targeted strategies to attract FDI into sectors.

# ACKNOWLEDGMENT

The authors extend their appreciation to the Arab Open University for funding this work (Grant No.: AOUKSA-524008).

# REFERENCES

- Xiong, T., Sun, H. (2021). Structure and dynamics of global capital and international trade: Analysis of the relationship between exports and foreign direct investment (FDI) from 2001 to 2006. International Journal of Finance & Economics, 26(1): 542-559. https://doi.org/10.1002/ijfe.1803
- [2] Adarov, A., Stehrer, R. (2021). Implications of foreign direct investment, capital formation and its structure for global value chains. The World Economy, 44(11): 3246-3299. https://doi.org/10.1111/twec.13160
- [3] te Velde, D.W. (2019). Enhancing spillovers from foreign direct investment. Supporting Economic Transformation (SET).
- [4] Contractor, F.J., Dangol, R., Nuruzzaman, N., Raghunath, S. (2020). How do country regulations and business environment impact foreign direct investment (FDI) inflows? International Business Review, 29(2): 101640. https://doi.org/10.1016/j.ibusrev.2019.101640
- [5] Haudi, H., Wijoyo, H., Cahyono, Y. (2020). Analysis of the most influential factors to attract foreign direct investment. Journal of Critical Reviews, 7(13): 4128-4135.
- [6] Karahan, Ö., Bayır, M. (2022). The effects of monetary policies on foreign direct investment inflows in emerging economies: Some policy implications for post-COVID-19. Future Business Journal, 8(1): 39. https://doi.org/10.1186/s43093-022-00152-6
- [7] Dhrifi, A., Jaziri, R., Alnahdi, S. (2020). Does foreign direct investment and environmental degradation matter for poverty? Evidence from developing countries. Structural Change and Economic Dynamics, 52, 13-21. https://doi.org/10.1016/j.strueco.2019.09.008
- [8] Al Naimi, S.M. (2022). Economic diversification trends in the Gulf: The case of Saudi Arabia. Circular Economy and Sustainability, 2: 221-230. https://doi.org/10.1007/s43615-021-00106-0
- [9] Joshua, U., Rotimi, M.E., Sarkodie, S.A. (2020). Global FDI inflow and its implication across economic income groups. Journal of Risk and Financial Management, 13(11): 291. https://doi.org/10.3390/jrfm13110291
- [10] Chaplyuk, V.Z., Akhmedov, F.N., Zeitoun, M.S., Abueva, M.M.S., Al Humssi, A.S. (2022). The impact of FDI on Algeria's economic growth. In Geo-Economy of the Future: Sustainable Agriculture and Alternative Energy, pp. 285-295. https://doi.org/10.1007/978-3-030-92303-7\_32
- [11] Eze, A.A., Nnaji, M., Nkalu, N.C. (2019). Impact of foreign direct investment on manufacturing sector output growth in Nigeria. International Journal of Applied Economics, Finance and Accounting, 5(2): 55-64. https://doi.org/10.33094/8.2017.2019.52.55.64
- [12] Ehmaidat, A., Jajuga, K. (2023). Foreign Direct Investment in Saudi Arabia. Journal of Contemporary Issues in Business and Government, 29(3): 605-622.
- [13] Painceira, J.P., Saludjian, A. (2021). Latin American international integration and global value chains: What changed after the 2008 global financial crisis. In Capital Movements and Corporate Dominance in Latin America, pp. 175-192. https://doi.org/10.4337/9781800372146.00020
- [14] Roy, M. (2019). Elevating services: Services trade policy, WTO commitments, and their role in economic

development and trade integration. Journal of World Trade, 53(6): 923-950.

https://doi.org/10.54648/trad2019037

- [15] Alshubiri, F.N. (2021). Analysis of financial sustainability indicators of higher education institutions on foreign direct investment: Empirical evidence in OECD countries. International Journal of Sustainability in Higher Education, 22(1): 77-99. https://doi.org/10.1108/IJSHE-10-2019-0306
- [16] Islam, M.A., Khan, M.A., Popp, J., Sroka, W., Oláh, J. (2020). Financial development and foreign direct investment—The moderating role of quality institutions. Sustainability, 12(9): 3556. https://doi.org/10.3390/su12093556
- [17] Nketiah-Amponsah, E., Sarpong, B. (2020). Ease of doing business and foreign direct investment: Case of Sub-Saharan Africa. International Advances in Economic Research, 26(3): 209-223. https://doi.org/10.1007/s11294-020-09798-w
- [18] Aziz, O.G. (2020). Dose the FDI flow into Arab region influenced by the global financial crisis? Risk and Financial Management, 2(1): p9. https://doi.org/10.30560/rfm.v2n1p9
- [19] Aysan, A., Kayani, F., Kayani, U.N. (2020). The Chinese inward FDI and economic prospects amid COVID-19 crisis. Pakistan Journal of Commerce and Social Sciences, 14(4): 1088-1105.
- [20] Kayani, F.N. (2021). Renewable energy and economic growth nexus: A case of United Arab Emirates. International Journal of Energy Economics and Policy, 11(5): 504-509. https://doi.org/10.32479/ijeep.11559
- [21] Kayani, F.N., Nasim, I., Saleem, K.A. (2024). Analyzing the impact of governance, environment and trade on inward FDI: A case of Cambodia, Thailand and Vietnam from ASEAN. International Journal of Energy Economics and Policy, 14(2): 523-534. https://doi.org/10.32479/ijeep.15486
- [22] Kayani, F.N., Gan, C. (2022). Foreign direct investment inflows and governance nexus: Evidence from the United States, China, and Singapore. Review of Pacific Basin Financial Markets and Policies, 25(4): 2250030. https://doi.org/10.1142/S0219091522500308
- [23] Paul, J., Feliciano-Cestero, M.M. (2021). Five decades of research on foreign direct investment by MNEs: An overview and research agenda. Journal of business research, 124: 800-812. https://doi.org/10.1016/j.jbusres.2020.04.017
- [24] Hayat, A. (2019). Foreign direct investments, institutional quality, and economic growth. The Journal of International Trade & Economic Development, 28(5): 561-579.

https://doi.org/10.1080/09638199.2018.1564064

- [25] Ross, A.G. (2019). Governance infrastructure and FDI flows in developing countries. Transnational Corporations Review, 11(2): 109-119. https://doi.org/10.1080/19186444.2019.1640572
- [26] Bouchoucha, N., Yahyaoui, I. (2019). Foreign direct investment and economic growth: The role of the governance. Economics Bulletin, 39(4): 2711-2725.
- [27] Bruno, R.L., Campos, N.F., Estrin, S. (2021). The effect on foreign direct investment of membership in the European Union. JCMS: Journal of Common Market Studies, 59(4): 802-821. https://doi.org/10.1111/jcms.13131

- [28] Nguyen, V.C. (2020). Trade liberalization, economic reforms and foreign direct investment–A critical analysis of the political transformation in Vietnam. International Journal of Advanced Science and Technology, 29(3): 6837-6850.
- [29] Kayani, F.N. (2022). A resilient China amid COVID-19 pandemic crisis: Innovative lessons for other countries. International Journal of Economics and Financial Issues, 12(5): 135-142. https://doi.org/10.32479/ijefi.13400
- [30] Alnaqbi, S.A., Alasad, S., Aljaghoub, H., Alami, A.H., Abdelkareem, M.A., Olabi, A.G. (2022). Applicability of hydropower generation and pumped hydro energy storage in the Middle East and North Africa. Energies, 15(7): 2412. https://doi.org/10.3390/en15072412
- [31] Calero, C., Turner, L.W. (2020). Regional economic development and tourism: A literature review to highlight future directions for regional tourism research. Tourism Economics, 26(1): 3-26. https://doi.org/10.1177/1354816619881244
- [32] Al-Ababneh, H.A., Malkawi, E.M., Popova, O., Tomashevskaya, E., Popova, S. (2021). Specificity of functioning of financial systems of Arab countries. Academy of Accounting and Financial Studies Journal, 25(5): 1-12.
- [33] Bergougui, B., Murshed, S.M. (2023). Spillover effects of FDI inflows on output growth: An analysis of aggregate and disaggregated FDI inflows of 13 MENA economies. Australian Economic Papers, 62(4): 668-692. https://doi.org/10.1111/1467-8454.12320
- [34] Dimitrova, A., Rogmans, T., Triki, D. (2020). Countryspecific determinants of FDI inflows to the MENA region: A systematic review and future research directions. Multinational Business Review, 28(1): 1-38. https://doi.org/10.1108/MBR-01-2019-0003
- [35] Amran, Y.A., Amran, Y.M., Alyousef, R., Alabduljabbar, H. (2020). Renewable and sustainable energy production in Saudi Arabia according to Saudi Vision 2030; Current status and future prospects. Journal of Cleaner Production, 247, 119602. https://doi.org/10.1016/j.jclepro.2019.119602
- [36] Woishi, W. (2019). The impact of digitization on the economy of KSA in the context of vision 2030. International Journal of Engineering Applied Sciences and Technology, 4(4): 312-316. https://doi.org/10.33564/IJEAST.2019.v04i04.051
- [37] Ali, A., Alsulaiman, F.A., Irshad, K., Shafiullah, M., Malik, S.A., Memon, A.H. (2021). Renewable portfolio standard from the perspective of policy network theory for Saudi Arabia Vision 2030 targets. In 2021 4th International Conference on Energy Conservation and Efficiency (ICECE), Lahore, Pakistan, pp. 1-5. https://doi.org/10.1109/ICECE51984.2021.9406286
- [38] Nawaz, F., Abu Saleem, K., Kayani, U. (2024). The Made in China 2025 strategy: Perceptions and reservations of China's state capitalist economic model. Corporate & Business Strategy Review, 5(1): 432-439. https://doi.org/10.22495/cbsrv5i1siart16
- [39] Nawaz, F., Kayani, U., Aysan, A.F. (2023). Nexus between foreign remittances and poverty alleviation: Empirical investigation of Tajikistan from Central Asia. Cogent Social Sciences, 9(2): 2275554. https://doi.org/10.1080/23311886.2023.2275554

- [40] ALMaghyadi, A.S., AL Mushi, R.M., Orijah, M., Al-Boqami, S. (2021). The hidden cost in entrepreneurial smes and the extent of their impact on entrepreneurs and entrepreneurship in Saudi Arabia. Multi-Knowledge Electronic Comprehensive Journal for Education & Science Publications (MECSJ).
- [41] Alenezi, A. (2020). Improving the Saudi Arabian Foreign Direct Investment Framework and Promoting Diversification. The University of Manchester (United Kingdom).
- [42] Alfatta, A. (2019). The impact of the Shari'ah on foreign direct investment and arbitration: The case of Saudi Arabia and its vision 2030. PhD thesis, University of Westminster Westminster Law School. https://doi.org/10.34737/qx8v1
- [43] Moshashai, D., Leber, A.M., Savage, J.D. (2020). Saudi Arabia plans for its economic future: Vision 2030, the National Transformation Plan and Saudi fiscal reform. British Journal of Middle Eastern Studies, 47(3): 381-401. https://doi.org/10.1080/13530194.2018.1500269
- [44] Solow, R.M. (1956). A contribution to the theory of economic growth. The quarterly journal of economics, 70(1): 65-94. https://doi.org/10.2307/1884513
- [45] Solow, R.M. (1957). Technical change and the aggregate production function. The Review of Economics and Statistics, 39(3): 312-320. https://doi.org/10.2307/1926047
- [46] Cobb, C.W., Douglas, P.H. (1928). A theory of production. The American Economic Review, 18(1): 139-165.
- [47] De Jager, J. (2004). Exogenous and Endogenous Growth. University of Pretoria ETD. https://repository.up.ac.za/bitstream/handle/2263/23183 /00front.pdf?.
- [48] Barro, R.J., Sala-I-Martin, X. (1995). Economic Growth. The MIT Press.
- [49] Herzer, D., Klasen, S. (2008). In search of FDI-led growth in developing countries: The way forward. Economic Modelling, 25(5): 793-810. https://doi.org/10.1016/j.econmod.2007.11.005
- [50] Engle, R.F., Granger, C.W.J. (1987). Cointegration and error correction: Representation, estimation and testing. Econometrica, 55(2): 251-276. https://doi.org/10.2307/1913236
- [51] Johansen, S. (1988). Statistical analysis of cointegrating vectors. Journal of Economic Dynamic and Control, 12 (2-3): 231-254. https://doi.org/10.1016/0165-1889(88)90041-3
- [52] Pesaran, M.H., Shin, Y. (1995). An autoregressive distributed-lag modelling approach to cointegration analysis. In Econometrics and Economic Theory in the 20th Century: The Ragnar Frish Centennial Symposium, pp. 371-413. https://doi.org/10.1017/CCOL521633230.011
- [53] Pesaran, M.H., Shin, Y., Smith, R.J. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16(3): 289-326. https://doi.org/10.1002/jae.616
- [54] Dickey, D.A., Fuller, W.A. (1979). Distribution of the estimators for autoregressive time series with a unit root. Journal of the American Statistical Association, 74(366a): 427-431. https://doi.org/10.2307/2286348