

Foreign direct investment in Saudi Arabia's post-pandemic ERA: Determinants and impact

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Abstract: This study investigates the key determinants of foreign direct investment (FDI) in Saudi Arabia during the post-pandemic era, focusing on the country's ongoing economic diversification efforts under Vision 2030. The research aims to understand how macroeconomic indicators such as GDP growth, inflation, exchange rate stability, trade openness, and government expenditure affect FDI inflows. A mixed-methods approach was employed, combining descriptive analysis with multiple regression techniques using data from 2017 to 2023. The findings reveal that market size, trade openness, and income level are the most influential factors in attracting FDI, while inflation and unemployment exhibit a more nuanced impact. The results also highlight a significant rebound in FDI after 2020, driven by structural reforms and increased investor confidence. The study concludes that a stable and transparent investment climate is essential for sustaining FDI growth. The findings offer valuable insights for policymakers to enhance Saudi Arabia's investment appeal by fostering regulatory stability, improving infrastructure, and supporting human capital development. These implications are particularly relevant as the Kingdom seeks to position itself as a competitive global investment hub in the evolving post-COVID global economy.

Keywords: COVID-19, Economic diversification, Foreign direct investment, Post-pandemic economy, Vision 2030.

1. Introduction

In an era marked by global economic shifts and the COVID-19 pandemic's long-term effects, understanding the dynamics of foreign direct investment has become increasingly crucial for nations striving to achieve sustainable growth and expansion. This is especially pertinent for Saudi Arabia, a country seeking economic diversification and lessening its reliance on oil money [1] as outlined in its ambitious Vision 2030 program published in Saudi Press Agency [2]. An investment that represents a long-term stake and is managed by a foreign investor in a business situated in a different economy is known as Foreign Direct Investment. This control aspect is a key feature of FDI. FDI inflow refers to the capital that an overseas investor gives to a foreign associate or receives from a foreign affiliate. From the perspective of the alternative economy, the same movements are referred to as FDI outflows. FDI flows are shown as credits minus debits, which can result in negative values in cases of reverse investment or disinvestment. The net debt of foreign associates to domestic companies, plus the capital and reserves attributed to a non-resident domestic company, is known as FDI stock [3].

Foreign direct investment (FDI) is critical to economic growth and development, providing capital, technology transfer, and employment opportunities. For Saudi Arabia, FDI is particularly vital as it pursues branching out its economy away from oil dependency, which aligns with its Vision 2030 initiative. The pandemic has introduced new challenges and opportunities, making comprehending the elements influencing FDI in this novel setting crucial.

KSA has experienced a significant transformation in its economic landscape over the past decade, mainly driven by the ambitious "Saudi Vision 2030" initiative. A crucial aspect of this vision is the

emphasis on increasing the country's foreign direct investment ratio to the global average of 5.7%, up from the current 3.8% [4]. As Saudi Arabia navigates the post-pandemic age, comprehending the effects and factors that influence foreign direct investment is more important than ever.

An analytical study by Ebrahim, et al. [5] analyzes the factors influencing FDI in KSA but uses a different time frame and econometric model. This study emphasizes how important foreign direct investment is to economic expansion, particularly for developing nations like Saudi Arabia. It emphasizes the importance of understanding the determinants of FDI to attract and retain foreign investments. The study aims to reexamine these factors in light of Saudi Arabia and contribute to the existing literature.

For Vision 2030, Saudi Arabia also focuses on economic diversification and the role of the Public Investment Fund (PIF) in attracting FDI [6]. Saudi Arabia is strong enough to face oil price surprises and highlights the impact of diversification policies [7].

In recent years, Saudi Arabia has made concerted efforts to attract FDI as part of its broader economic diversification strategy, especially after the COVID-19 pandemic, which has had a major effect on international investment flows. Launched in 2016, the Kingdom's Vision 2030 initiative lays out bold objectives to lessen the nation's dependency on gas and oil and create a more diverse, knowledge-based economy [8]. A crucial aspect of this vision is increasing the FDI-to-GDP ratio from 3.8% to 5.7%, which aligns with the global average [9].

A United Nations Conference on Trade and Development report states that the COVID-19 pandemic's economic effects caused Saudi Arabia's foreign direct investment inflows to drop by 36% in 2020 [10]. However, the Kingdom has continued to pursue its economic diversification strategy, with efforts to attract FDI across a range of sectors. A study by KSA General Investment Authority [11] found that the country's infrastructure availability, large market size, and trade openness have been key factors in attracting FDI post-pandemic. The Kingdom's FDI inflows rebounded in 2021, reaching \$19.3 billion, a 68% increase compared to the previous year. Fustier and Bouloukos [10] suggest that Saudi Arabia has continued to pursue its economic diversification strategy and attract foreign investment across various sectors despite the challenges posed by the pandemic.

Many additional factors, such as the GDP growth rate, imports, and exports, also influence the flow of FDI in Saudi Arabia [8]. Moreover, the inflow of FDI can benefit the financing entity and the host government because it can aid the nation's socioeconomic development and economic progress.

The Kingdom has invited international investment in several industries, including manufacturing, infrastructure, tourism, and renewable energy, to diversify its economy and lessen its dependency on oil and gas [12].

The oil and gas industry has historically contributed to the Saudi Arabian economy, accounting for a sizeable amount of the nation's GDP and export revenue. However, recently, the government has sought to diversify the nation's economy and decrease its dependence on hydrocarbons by launching its ambitions [12]. A key component of this strategy has been the pursuit of increased foreign direct investment across various sectors, from manufacturing and infrastructure to tourism and renewable energy. The research examines the key factors that influence FDI inflows to the Kingdom and the subsequent impact of FDI on the nation's economy, stressing employment and GDP growth. Prior research has observed the connection between FDI and economic results in the Kingdom, providing insightful information.

The COVID-19 epidemic has significantly impacted global investment flows. FDI declined considerably in 2020 due to the economic disruptions caused by the crisis [13]. However, as the global economy gradually recovers, understanding the determinants that shape foreign direct investment inflows to KSA and the subsequent effect on the Saudi economy is critical for policymakers and investors alike.

The current research paper aims to build upon these findings and comprehensively analyze the impact and factors of FDI in the Kingdom during the post-pandemic era. This period is particularly significant, as the global economy has faced unprecedented challenges because of the COVID-19

epidemic, and it is crucial to comprehend how these occurrences have influenced Saudi Arabia's investment environment.

By examining the latest trends and factors influencing FDI in the Kingdom, the present research will offer invaluable insights to stakeholders and policymakers as they navigate the changing economic landscape and work towards achieving the ambitious goals outlined in the Saudi Vision 2030.

Present research follows this structure: Section 1 is abstract, section 2 introduces Saudi Arabia's FDI and determinants of foreign direct investment, section 3 discusses the literature reviews, 4th defines the key determinants, 5th research methodology, and data collection, section 6 gives empirical results and discussion, and section 7 contains summary and conclusion.

2. Review of Literature

This section integrates recent academic contributions published in 2023 and 2024 that specifically address FDI behavior in post-pandemic contexts, particularly within Saudi Arabia's economic diversification efforts. A substantial volume of research examines the various elements that affect FDI inflows. Numerous research studies have determined the factors influencing FDI inflows internationally. Knowing the effects and factors influencing FDI in Saudi Arabia has become more important during the COVID-19 epidemic. This literature review aims to summarize the state of knowledge on the subject and pinpoint the major factors determining FDI in the nation in the aftermath of the pandemic.

The study conducted by Elimam [14] on determinants of FDI in the Kingdom highlights several key factors, like trade openness, infrastructure availability, and market size, which have been identified as significant drivers of foreign investment in the country. A robust infrastructure and a large domestic market can attract multinational corporations, as they provide the necessary resources and consumer base for their operations [9]. Additionally, the study by Kaloul [15] suggests that the charm of Arab countries, including Saudi Arabia, to FDI is influenced by a range of aspects, such as the regulatory environment, the stability of the economy, and politics and market conditions.

Previous studies have shown that the FDI Determinants can differ throughout nations. Jaiblai and Shenai [16] used a panel cointegration methodology to investigate the factors influencing direct FDI in ten sub-Saharan African countries from 1990 to 2017. Their findings demonstrate that smaller markets with superior infrastructure see more FDI inflows. They conclude that to boost FDI inflows, all economies under examination must become more open. Similarly, Lee, et al. [17] stressed that market size and trade openness are significant factors that influence FDI inflows into the nation.

Ghazalian [18] examines the factors influencing and impacting FDI in Saudi Arabia post-COVID era. The author argues that market size, infrastructure development, trade openness, and macroeconomic stability are key factors driving FDI inflows to the Kingdom. The study also finds no substantial correlation between FDI and economic growth, although it does show a positive association between FDI and the creation of jobs. However, research by Saidi and Ochi [19] found no substantial correlation linking GDP growth and FDI, suggesting that the benefits of foreign investment may be more nuanced or dependent on other factors.

Market size, commercial openness, and political stability are important factors that influence foreign direct investment inflows into Saudi Arabia, according to a study by Ahmad and Ahmed [20]. Regarding the impact of FDI, it was found that it has a positive and substantial impact on productivity and economic growth in Saudi Arabia. Correspondingly, a study by Nosova [21] concluded that FDI positively impacts employment generation in the country. Furthermore, Ayinde, et al. [22] examined the act of technological innovation and the growth of human capital in attracting FDI to Saudi Arabia, finding that these factors are crucial in determining FDI inflows to the Kingdom.

The findings of Ayinde, et al. [22] are that macroeconomic factors significantly impact FDI flows to developing nations, especially during instability like COVID-19. Specifically, the authors found that Interest rates and trade balance significantly impact net FDI flows to emerging economies. The lagged

effects of macroeconomic factors play a crucial role. The effect of macroeconomic determinants on FDI varies depending on the history of FDI receipts.

Although Fustier and Bouloukos [10] comprehensively examine COVID-19's socioeconomic effects on Saudi Arabia, they do not explicitly state a singular main finding. However, the paper emphasizes the pandemic's uneven impact on different groups within the Kingdom. It highlights that marginalized and excluded groups, those dependent on the informal economy, and those in vulnerable locations are likely to be disproportionately affected. This study also underscores the importance of addressing these inequalities through targeted policy interventions. It suggests focusing on social protection programs, healthcare access, and support for vulnerable groups to mitigate the pandemic's long-term consequences.

Another important work by Al-Qahtani and Albakjaji [23] finds that while the Kingdom's legitimate framework provides a foundation for attracting foreign investment, there are some areas for improvement. The authors conclude that while the Saudi legal framework provides a basis for attracting foreign investment, addressing these shortcomings would make it significantly more attractive to foreign investors. Alharthi, et al. [24] explore the factors influencing FDI in the GCC.

Bousrih and Alkofahi [25] examine the factors influencing FDI in Saudi Arabia. Using annual data from 1990 to 2019, the study employs a Vector Error Correction Model to explore the link between FDI and several economic indicators, such as employment, capital market robustness, and economic growth. The results show a strong correlation over the long term between Saudi Arabia's employment, capital market stability, and foreign direct investment. Notably, the labour force demonstrates the most substantial long-run impact on FDI. The study underscores the importance of a robust capital market and a large, skilled labour force in attracting FDI to Saudi Arabia.

Ehmaidat and Jajuga [26] discovered a long-term, reciprocal link between local capital and foreign direct investment in Saudi Arabia. Additionally, the analysis found a long-term negative bidirectional causal relationship between non-oil GDP growth and both FDI and domestic capital investment.

While Almahmood [27] does not have a section explicitly titled "Main Findings," it does lay out three main areas of focus: (1) Examining the patterns of foreign direct investment in the Kingdom from 1960 to 2005. (2) Investigating how risk influences the foreign joint venture equity share. (3) Exploring what factors of the source economy determine FDI inflow to Saudi Arabia.

The market size has a significant and positive relationship with FDI in the Kingdom [28]. The relation shows that as Saudi Arabia's market size increases, so do foreign direct investment inflows. The study also discovered a strong and negative correlation between FDI and GDP per capita in the Saudi context. So, as GDP per capita increases in Saudi Arabia, FDI inflows decrease. This finding was contrary to the authors' expectations.

Abdel-Rahman [29] finds that the primary factors influencing foreign direct investment inflows to Saudi Arabia are economic and socio-political. Specifically, the study found that the degree of Saudi Arabia's economic activity, particularly the GDP level, significantly and positively impacts attracting FDI. Additionally, socio-political factors, such as the country's risk profile, are vital in shaping investor decisions.

Conclusively, the literature review on the impact and determinants of Foreign Direct Investment in Saudi Arabia during the post-pandemic era reveals a multifaceted landscape. It underscores the significance of economic stability, regulatory frameworks, and infrastructural development as pivotal factors influencing FDI. The review also highlights the evolving role of digital transformation and diversification strategies in attracting foreign investments, emphasizing the need for continuous policy adaptation to sustain and enhance FDI inflows in the dynamic global economy.

2.1. Research Methodology and Data Collection

This study uses a mixed-methods approach, combining qualitative and quantitative analysis to understand the factors determining and affecting FDI.

The primary objectives of this study are: [30]

1. To analyze the impact of the COVID-19 pandemic on FDI inflows into Saudi Arabia.
2. To identify the key determinants of FDI in the post-pandemic period.
3. To provide policy recommendations for enhancing FDI inflows in the future.

Data and information were gathered from the General Authority for Statistics [31]; Statista [32]; International Monetary Fund [7]; Ministry of Investment [33] and World Bank [34] and SAMA. The sample includes data from the pre- and post-pandemic period, i.e., from 2017 to 2023, regarding Saudi Arabia. Cross-sectional regression was employed in studies examining the factors influencing FDI, like Rathnayake, et al. [35] and Demirhan and Masca [36]. The equation looks like this:

$$FDI = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_i X_i + \varepsilon$$

Where FDI represents foreign direct investment, X's represents the independent variables, and ε is the error term. The above equation can be written as Alalmi [28]:

$$Y_i = \alpha + \sum \beta_i X_i + n_{i=1} \varepsilon_i,$$

Where:

Y_i is the FDI inflow as a GDP%

α is the constant term

β_i symbolizes the independent variables' coefficients.

X_i represents independent factors influencing FDI

ε_i represents the error term

The independent factors include an explanation of the factors that can be seen in Table 1:

- X_{i1} = GDP growth rate
- X_{i2} = Inflation rate (annual %age)
- X_{i3} = Exchange rate
- X_{i4} = Unemployment rate
- X_{i5} = Trade openness
- X_{i6} = Market size (GDP)
- X_{i7} = Income level (GDP per capita)
- X_{i8} = Government Expenditure (study period)

The model with these independent variables will be:

$$Y_i = \alpha + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 X_{i5} + \beta_6 X_{i6} + \beta_7 X_{i7} + \beta_8 X_{i8} + \varepsilon_i$$

Foreign direct investment is the dependent variable in the Multiple Regression Model, while the other factors are the explanatory variables. In addition, qualitative analysis, including a review of relevant literature and policy documents, will be conducted to provide contextual insights into Saudi Arabia's evolving FDI landscape.

Table 1.
Key Determinants of FDI Variables and Definitions.

No.	Determinants	Explanation
Xi1.	GDP growth rate [37, 38]	Market expansion quickly maximizes profits; hence, a higher growth rate denotes a rise in the FDI influx. The GDP growth rate is expected to positively affect FDI inflows.
Xi2.	Inflation rate [39]	It is anticipated that FDI and inflation will have a negative association. A high inflation rate can destabilize the investment environment, reducing a nation's appeal to foreign investors.
Xi3.	Exchange rate [40]	A depreciation in the host country's exchange rate could lower production costs for foreign investors, thereby attracting greater FDI.
Xi4.	Unemployment rate [41]	A high unemployment rate indicates weak economic conditions and an investment climate, thus discouraging FDI.
Xi5.	Trade openness [13, 42, 43]	Openness is expected to attract more foreign investors. Government stability indicates a secure and stable environment for investments. Theoretically, a nation with fewer regulations and trade barriers is more likely to draw FDI.
Xi6.	Market size (GDP) [44]	The magnitude of the domestic market, as measured by GDP, is an important determinant of FDI, as a large market provides economies of scale and a potentially higher rate of return for foreign investors.
Xi7.	Income level (GDP per capita) [9]	High per capita income is usually associated with a large domestic market, high purchasing power, and better infrastructure, all contributing to attracting FDI.
Xi8.	Government Expenditure (study period) [45]	A higher level of government spending signals an improvement in infrastructure and public services, which increases the nation's appeal to international investors.

2.2. Empirical Results & Discussion

In general, FDI inflows and GDP growth are positively correlated. Higher GDP growth rates attract more FDI as investors seek stable and growing markets [34].

The sharp decline in GDP growth in 2020 due to the pandemic also saw a corresponding drop in FDI inflows, highlighting the sensitivity of FDI to economic stability [46].

Table 2 depicts the data between the explanatory variable and the response variable.

Table 2.
Economic Indicators and FDI Inflows in Saudi Arabia (2017–2023).

Determinants	Responsive variable	Explanatory Variable							
	FDI Inflow (in SAR billions)	GDP growth (%)	Inflation rate (%)	Exchange rate (\$ to SR)	Unemployment rate (%)	Trade openness (%)	Market size (GDP in trillion SAR)	Income level (GDP per capita in SAR)	Government Expenditure (in billion \$)
2017	4	7.40	-0.84	3.75	5.90	56.80	2.56	86,555	926
2018	46	18.40	2.46	3.75	6.00	60.20	2.96	105,135	1030
2019	12	-1.00	-2.09	3.75	5.60	58.10	2.98	104,598	1059
2020	6	-12.40	3.45	3.75	7.70	54.30	2.63	87,268	1076
2021	87	19.10	3.06	3.75	6.60	57.60	3.13	106,485	1015
2022	105	26.80	2.47	3.75	5.60	61.40	3.79	129,203	1132
2023	97	-3.70	2.33	3.75	4.43	59.70	4.01	118,216	1114

Source: database.stats.gov.sa, www.imf.org, www.misa.gov.sa, www.data.worldbank.org, www.sama.gov.sa.

Table 2 displays data from 2017 to 2023, along with several economic indicators and how they relate to foreign direct investment inflows into Saudi Arabia (SAR billions). This is the annual amount of foreign direct investment that enters the nation. Higher FDI inflows indicate greater interest in foreign investment. GDP growth measures the yearly rise in the nation's economic production. Since it implies a rising economy, a greater GDP growth rate frequently attracts more foreign direct

investment. For instance, there was a favorable association between the GDP growth of 19.10% and the FDI inflow of 87 billion SAR in 2021. This shows how quickly prices for products and services are generally increasing. Moderate inflation typically indicates a strong economy. However, severe inflation or deflation may discourage FDI. For example, in 2017, FDI inflow was comparatively modest at 4 billion SAR, while the inflation rate was -0.84%. The exchange rate displays the value of one US dollar in Saudi Riyals. Because it lowers currency risk, a stable exchange rate can increase a nation's appeal to international investors. The exchange rate has stayed steady at 3.75, suggesting stability. This calculates the unemployment rate for the labor force.

Since lower unemployment rates signify a healthy labor market, they can draw foreign direct investment. For instance, the large FDI influx in 2022 and 2023 may have been influenced by the decline in the jobless rate from 7.70% in 2020 to 4.43% in 2023. The total number of products and services imported and exported, expressed as a percentage of GDP, is known as trade openness. Increased trade openness signals a nation's inclusion into the world economy, which might draw foreign direct investment. For example, FDI inflow rose with trade openness, from 54.30% in 2020 to 61.40% in 2022. The nation's total economic output is referred to as the market size. Because they present more commercial opportunities, larger markets can attract more foreign direct investment. The market size showed a favourable trend, increasing from 2.56 trillion SAR in 2017 to 4.01 trillion SAR in 2023. This gauges the nation's residents' average income. Higher income levels indicate a wealthier customer base, which can attract foreign direct investment. In 2023, for instance, GDP per capita climbed from 86,555 SAR in 2017 to 118,216 SAR. Government expenditure reflects the total government spending. Higher government spending can stimulate economic activity and attract FDI. For instance, government expenditure increased from 926 billion SAR in 2017 to 1,114 billion SAR in 2023.

Table 3.
Descriptive Statistics of FDI Determinants (2017–2023).

	Mean	SD	Kurtosis	Skewness	Range	Min	Max
FDI Inflow (in SAR billions)	51	44.92215489	-2.425752371	0.12113897	101	4	105
GDP growth (%)	7.8	14.25330371	-1.451234194	-0.076705098	39.2	-12.4	26.8
Inflation rate (%)	1.548571429	2.126604716	-0.199985086	-1.199859154	5.54	-2.09	3.45
Exchange rate (\$ to SR)	3.75	0	ND	ND	0	3.75	3.75
Unemployment rate (%)	5.975714286	1.003391867	1.386079697	0.362704871	3.27	4.43	7.7
Trade openness (%)	58.3	2.379075451	-0.002442283	-0.490941078	7.1	54.3	61.4
Market size (GDP in trillion SAR)	3.151428571	0.552733467	-0.85956	0.735888177	1.45	2.56	4.01
Income level (GDP per capita in SAR)	105351.4286	15365.60148	-0.521061519	0.202266004	42648	86555	129203
Government Expenditure (in billion \$)	1050.285714	69.01380124	0.80916484	-0.816457638	206	926	1132

In Table 3, the FDI inflow shows significant variability, as indicated by the high standard deviation (44.92). The slight right skewness (0.17) suggests that a few higher values increase the mean. The negative kurtosis (-2.38) indicates a flatter distribution with fewer extreme values.

Instead of examining all the determinants together, the analysis will focus on one determinant at a time to understand its specific impact or role. This approach helps isolate the effects of each determinant and provides a clearer understanding of how each one influences the outcome.

2.2. GDP Growth Rate

Figure 1 represents various points scattered across the graph, showing the relationship between GDP Growth Rate and FDI Inflow. The line of best fit is drawn through the points, indicating a positive correlation between GDP Growth Rate and FDI Inflow. As the GDP Growth Rate increases, the FDI Inflow also tends to increase. The trend line equation is $y = 1.7407x + 37.423$, where 'y' is FDI

Inflow and 'x' is GDP Growth Rate. The R^2 value is 0.305, suggesting that approximately 30.5% of the variability in FDI Inflow can be explained by the GDP Growth Rate according to this linear model. Higher GDP growth rates make a country more attractive to foreign investors, increasing FDI inflow. This can be crucial for economic analysts and policymakers to understand how economic growth can drive foreign investment. Mohammed [45] also show the same results.

The positive skewness (0.47) in both FDI inflow and GDP growth indicates more observations on the lower end, with a few high values pulling the mean upwards. The moderate standard deviation in GDP growth compared to the high variability in FDI inflow suggests that while GDP growth fluctuates, FDI inflow is even more volatile [47]. This can be seen in Table 3. The data suggests that GDP growth is a significant determinant of FDI inflow in Saudi Arabia, with higher growth rates generally attracting more foreign investment. However, Table 2 shows a negative growth rate due to the COVID-19 pandemic, which decreased FDI inflow in 2020. The COVID-19 pandemic significantly affected Saudi Arabia's economic growth. In 2020, the country's GDP declined by around 4.1% due to low global oil prices and reduced crude oil production. Additionally, disruptions in non-oil industries, such as religious tourism, hospitality, transportation, and retail, further contributed to this economic downturn [48].

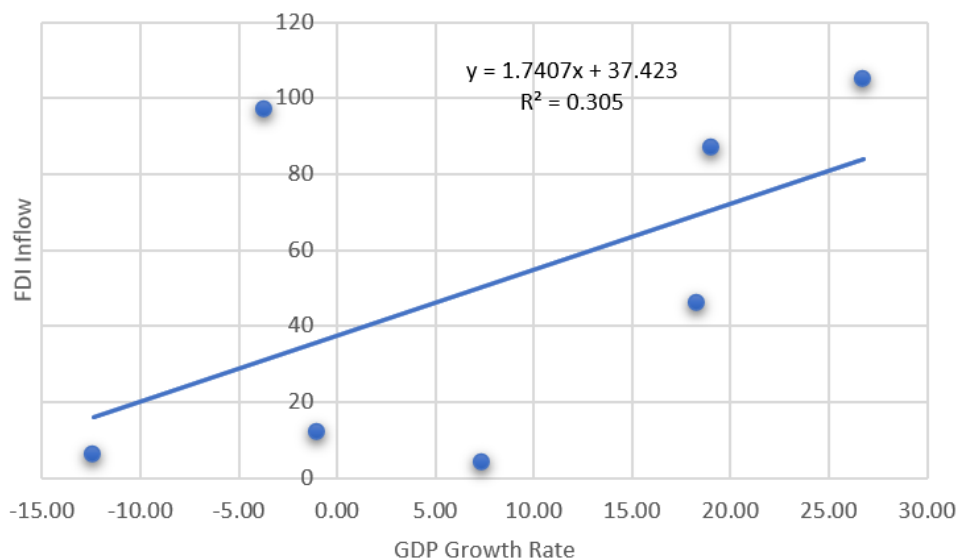


Figure 1.
GDP Growth Determining FDI Inflow.

This analysis implies that higher GDP growth rates are generally associated with higher FDI inflows, though other factors also play a significant role. These results are coherent with the literature, which suggests that the GDP's high growth rate is a key attraction for foreign investors, as it signals a rapidly expanding market with opportunities for growth and higher potential returns.

2.3. Inflation Rate

Various points are scattered across Figure 2, showing the relationship between the inflation rate and FDI inflow [49]. A line of best fit is drawn through the points, indicating a positive correlation between the inflation rate and FDI inflow. As the inflation rate increases, the FDI inflow also tends to increase. The trend line equation is $y = 11.209x + 33.642$, where 'y' is FDI Inflow and 'x' is the Inflation Rate. The R^2 value is 0.2816, suggesting that approximately 28.16% of the variability in FDI inflow can be explained by the inflation rate according to this linear model. Higher inflation rates might indicate a

growing economy, which can attract more foreign direct investment. However, the R^2 value suggests that this relationship is not very strong, meaning other factors also significantly influence FDI inflow.

The inflation rate, with a 2.12% standard deviation, is relatively low on average but shows variability. The left skewness (-1.19) indicates that lower inflation rates, with occasional deflation, are more common. As shown in Table 3, there are fewer extremely positive or negative events, as demonstrated by the platykurtic kurtosis of -0.19.

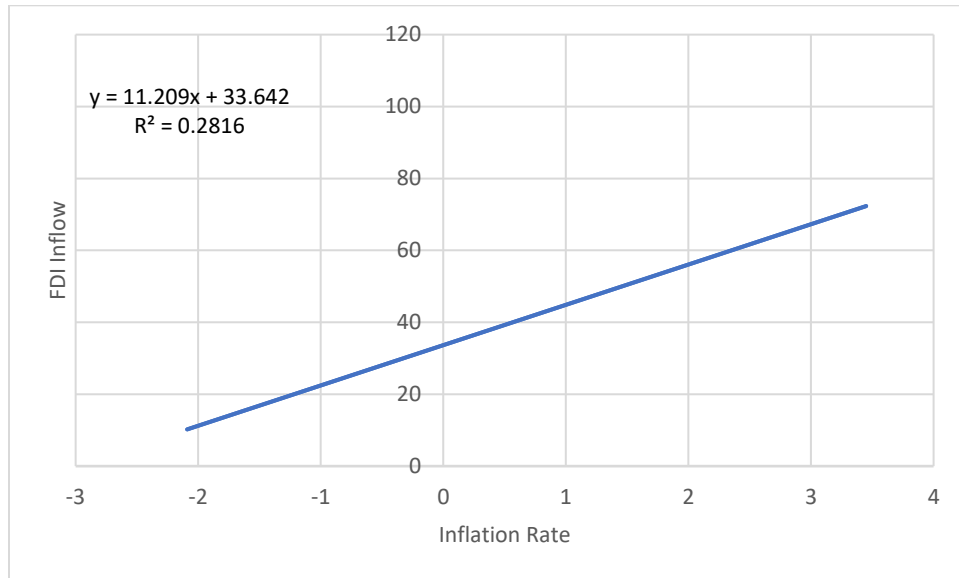


Figure 2.
Inflation Rate Determining FDI Inflow.

This analysis suggests that although FDI influx and inflation are related, other factors also greatly influence the inflation rate.

The inflation rate was significantly volatile, with periods of deflation (negative inflation) in 2017 and 2019. The inflation rate spiked in 2020 owing to the economic disruptions caused by the COVID-19 pandemic. It has been more stable recently, and projections indicate a moderate rate for 2024 [32, 46, 50].

Despite inflationary pressures, Saudi Arabia's FDI stock grew significantly. By 2022, it had increased by 52% compared to 2017 [33]. This growth indicates strong investor confidence in the Saudi market, driven by economic reforms and diversification efforts under Vision 2030.

The annual inflation rate in Saudi Arabia has fluctuated in the current period. For instance, in August 2024, the inflation rate was 1.6%, influenced by rising costs in housing, utilities, and food [31]. These inflationary trends can affect business costs, potentially impacting FDI decisions.

Inflation can have varying effects on different sectors. Rising costs in construction and utilities might deter real estate investment, while industries less affected by inflation, such as technology and services, might continue to attract significant FDI [51].

While inflation poses challenges, Saudi Arabia's strategic reforms and economic diversification efforts have helped sustain and even boost FDI inflows during this period.

2.4. Exchange Rate

The stability of the Saudi Riyal's exchange rate relative to the US dollar has been a major element in preserving investor confidence and drawing in foreign direct investment. The Real Effective

Exchange Rate, however, has varied, indicating changes in the relative competitiveness of the Saudi economy over time.

The relationship between FDI inflow and the exchange rate is depicted in Figure 3. Despite the fixed exchange rate of 3.75, the FDI inflow varies significantly, ranging from approximately SAR 4 to 105 billion. This suggests that factors other than the exchange rate are influencing FDI inflow. These could include economic policies, political stability, market conditions, or investor confidence. This variability in FDI inflow indicates multiple other factors that determine the level of FDI. Table 3 shows the exchange rate fixed at 3.75 SR per USD, showing no variability.

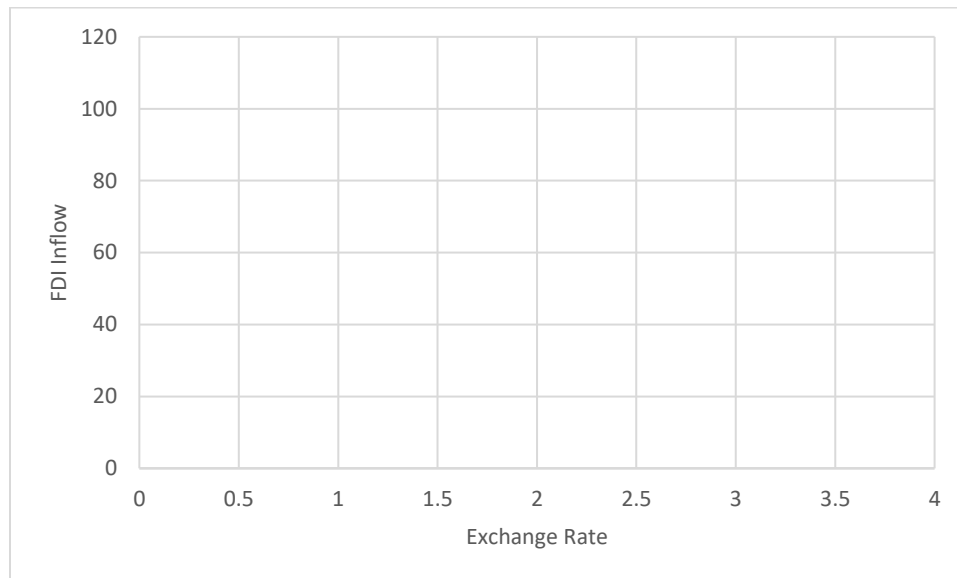


Figure 3.
Exchange Rate Determining FDI Inflow.

This stability generally encouraged FDI by reducing exchange rate risk for foreign investors [52]. It was relatively low at SAR 4 billion in 2017. There was a significant increase to SAR 46 billion in 2018, driven by economic reforms and efforts to attract foreign investment. FDI inflows dropped to SAR 12 billion in 2019, reflecting global economic uncertainties and regional geopolitical tensions. macro trends

The REER (Real Effective Exchange Rate) [53] provides a broader assessment of the currency's value, adjusted for inflation and trade with other countries. During 2017-2024, before and after the pandemic, the REER for Saudi Arabia has shown some fluctuations, reflecting changes in competitiveness and inflation rates. For example, in July 2024, the REER was 127.2 (2005=100), compared to 127.8 in the previous month.

Due to the COVID-19 pandemic, FDI inflows plummeted to SAR 6 billion during 2020. Then, there was a remarkable recovery in 2021, with FDI inflows surging to SAR 87 billion, reflecting the Kingdom's efforts to attract investment through economic reforms. In 2022, it continued to grow, reaching SAR 105 billion [52]. During 2023-2024, the trend of increasing FDI inflows persisted, supported by ongoing economic diversification and investment-friendly policies, as mentioned in the report of the Ministry of Investment [33]. However, no impact of the COVID-19 pandemic was seen on the exchange rate.

2.5. Unemployment Rate

It was shown that there was a substantial and adverse correlation between the unemployment rate and FDI inflows. High unemployment rates indicate weak economic conditions and an unfavourable

investment climate. During 2017-2019, FDI inflows were relatively stable, contributing to job creation and economic diversification efforts. The unemployment rate for Saudi nationals decreased slightly from 12.8% in 2017 to 12.0% in 2019 [51]. The COVID-19 pandemic in 2020 resulted in a brief delay, which slightly declined the FDI inflows. This led to a slight increase in the unemployment rate to 12.6% [51].

The trend line in Figure 4 of the best fit is drawn through the points, indicating a negative correlation between the unemployment rate and FDI inflow. As the unemployment rate increases, the FDI inflow tends to decrease. The trend line equation is $y = -21.259x + 178.04$, where 'y' is FDI Inflow and 'x' is the Unemployment Rate. The R^2 value is 0.2255, suggesting that approximately 22.55% of the variability in FDI inflow can be explained by the unemployment rate according to this linear model. Higher unemployment rates might indicate economic instability, making a country less attractive to foreign investors and decreasing FDI inflow. This relationship highlights the importance of maintaining low unemployment rates to attract foreign investment. This graph underscores the potential impact of unemployment on foreign direct investment, which can be crucial for economic analysts and policymakers.

Further, Table 3 shows the unemployment rate with moderate variability. The slightly positive right skewness (0.36) indicates that higher unemployment rates are more common. The kurtosis (1.00) shows more concentration towards the mean of 5.97%.

The downward slope of the trend line confirms that higher unemployment rates are associated with lower FDI inflows. The data points are scattered around the trend line, showing variability in FDI inflow at different unemployment rates. This scatter indicates that while there is a general trend, the relationship is not perfectly linear.

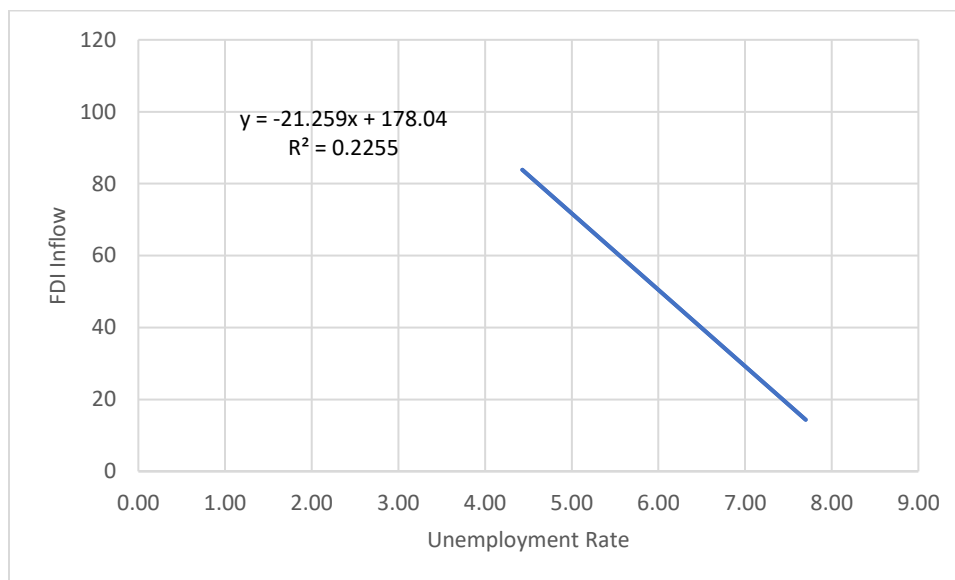


Figure 4.
Unemployment Rate Determining FDI Inflow.

As the global economy began to recover, Saudi Arabia implemented various reforms under Vision 2030 to attract more FDI. These efforts included improving the business environment and offering incentives to foreign investors. Consequently, the unemployment rate for Saudis decreased to 6.6% in 2021 and 4.43% in 2023.

Effat University [51] indicates that FDI positively and statistically significantly impacts reducing unemployment in Saudi Arabia. The inflows of foreign capital have facilitated the creation of new jobs, particularly in non-oil sectors, aligning with the goals of Vision 2030.

Higher unemployment rates may signal economic instability, deterring foreign investors. Policymakers might focus on reducing unemployment to attract more FDI, as lower unemployment rates appear to be associated with higher FDI inflows. This analysis highlights the importance of maintaining low unemployment rates to foster a favourable environment for foreign direct investment.

2.6. Trade Openness

The findings also demonstrate that trade openness significantly and favourably affects FDI inflows, suggesting that countries with fewer trade barriers and more open economies successfully attract foreign direct investment. Additionally, the analysis showed a strong and positive correlation between foreign direct investment and trade openness. This is in line with the theoretical expectation that countries with fewer trade barriers and more open economies are better able to attract foreign investment.

The trend line in Figure 5 of the best fit is drawn through the points, indicating a positive correlation between trade openness and FDI inflow. As trade openness increases, the FDI inflow also tends to increase. The trend line equation is $y = 13.41x - 730.8$, where 'y' is FDI Inflow and 'x' is Trade Openness. The R^2 value is 0.5004, suggesting that approximately 50.04% of the variability in FDI inflow can be explained by trade openness according to this linear model. Higher trade openness indicates fewer trade barriers and more favorable conditions for international trade, making a country more attractive to foreign investors. This can increase FDI inflow, which benefits economic growth and development. This graph highlights the importance of trade policies in attracting foreign direct investment, which can be crucial for financial analysts and policymakers.

Table 3 represents a similar status, suggesting that Saudi Arabia's trade openness has a relatively high average but significant variability. The platykurtic nature of the distribution, with -0.002 kurtosis, indicates a higher likelihood of extreme values. At the same time, the left skewness (0.49) suggests that lower values of trade openness are more common than higher ones. This could imply periods of reduced trade activity or economic policies that temporarily limit trade.

Higher trade openness may attract more foreign direct investment, indicating a more open and accessible market. Policymakers might focus on increasing trade openness to attract more FDI, which appears to be associated with higher FDI inflows [54].

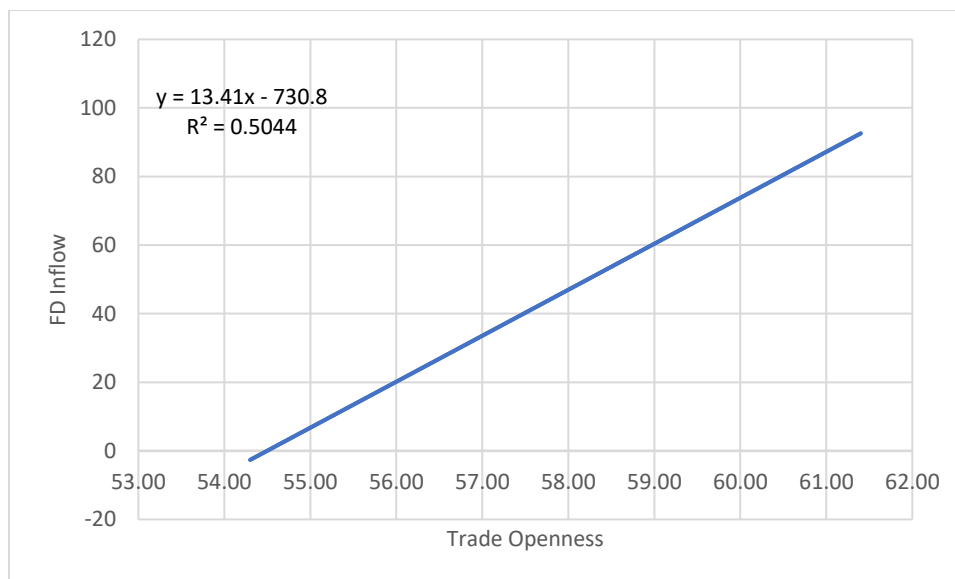


Figure 5.
Trade Openness Determining FDI Inflow.

During 2017-2019, Saudi Arabia began implementing Vision 2030, which included measures to increase trade openness and attract FDI. These efforts led to a gradual increase in FDI inflows, contributing to economic diversification and job creation [55]. As discussed above, COVID-19 creates uncertainties in the global FDI, and the Saudi government continues to promote trade openness through policy reforms and incentives for foreign investors. As the global economy recovered, Saudi Arabia's trade openness policies began to pay off. FDI inflows increased significantly during 2021-2022, driven by improved business conditions and strategic partnerships. This period saw a notable rise in investments in non-oil sectors. During 2023-2024, the positive trend continued, with trade openness facilitating greater FDI inflows. The government's efforts to streamline regulations and enhance the investment climate attracted more foreign capital, further boosting economic growth and employment [55].

2.7. Market Size

The multiple regression analysis results indicate that market size, measured by GDP, is significant and positively related to FDI in Saudi Arabia [56]. This finding is consistent with the literature, which suggests that a greater size of the domestic market is a key attraction for foreign investors, as it provides opportunities for economies of scale and higher potential returns.

Table 3 suggests that GDP has a high average with some variability in market size, as shown by the 0.55 standard deviation. The -0.86 Kurtosis shows that the platykurtic nature of the distribution indicates a flatter distribution with fewer extreme values. At the same time, the right skewness of 0.74 suggests that higher GDP values are more common than lower ones. This could imply periods of economic growth or favorable economic conditions that boost GDP. Similarly, Figure 6 shows various points scattered across the graph, showing the relationship between market size and FDI inflow. A line of best fit is drawn through the points, indicating this relation as positive. The trend line equation is $y = 72.07x - 176.12$, where 'y' is FDI Inflow and 'x' is Market Size (GDP). According to this linear model, the R^2 value is 0.7864 , suggesting that approximately 78.64% of the variability in FDI inflow can be explained by market size. Larger market sizes (higher GDP) make a country more attractive to foreign investors, leading to increased FDI inflow. This relationship highlights the importance of economic growth in attracting foreign direct investment, which can further fuel economic development. This graph underscores the significant impact of market size on foreign direct investment, which is crucial for financial analysts and policymakers.

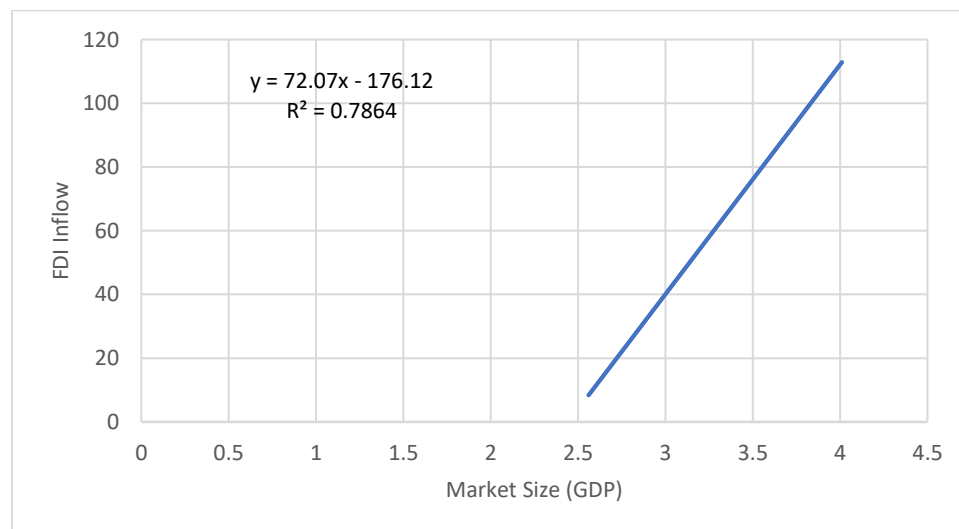


Figure 6.
Market Size Determining FDI Inflow.

Generally, larger markets attract more foreign investors due to greater opportunities & potential returns. The COVID-19 pandemic caused a considerable decline in market size in several industries, most notably retail, hospitality, and tourism. This downturn usually deters FDI as investors seek stable and expanding markets [30]. Policymakers might focus on growing market size (e.g., through economic growth policies) to draw more FDI. This analysis highlights the significant impact of market size on attracting foreign direct investment, suggesting that larger economies are more likely to receive higher FDI inflows.

2.8. Income Level

The study also found a strong positive correlation between FDI inflows and income (GDP per capita) [13]. This implies that nations with higher per capita income, often associated with a higher middle class and greater purchasing power, are more appealing to international investors seeking to tap into a growing consumer market.

Figure 7 shows a positive correlation between GDP per capita and FDI inflow, which can be seen by the trend line equation $y = 0.0026x - 220.31$, where 'y' is FDI Inflow and 'x' is GDP Per Capita. The R^2 value is 0.776, suggesting that approximately 77.6% of the variability in FDI inflow can be explained by GDP per capita according to this linear model. Higher GDP per capita indicates a wealthier population, which can make a country more attractive to foreign investors. This can increase FDI inflow, which benefits economic growth and development. This graph highlights the significant impact of GDP per capita on foreign direct investment, which is crucial for financial analysts and policymakers.

The trend line's upward slope attests to the relationship between increased FDI inflows and greater income levels. The data points' close clustering around the trend line demonstrates a steady rise in FDI inflow with rising GDP per capita. This tight clustering indicates a strong and reliable relationship.

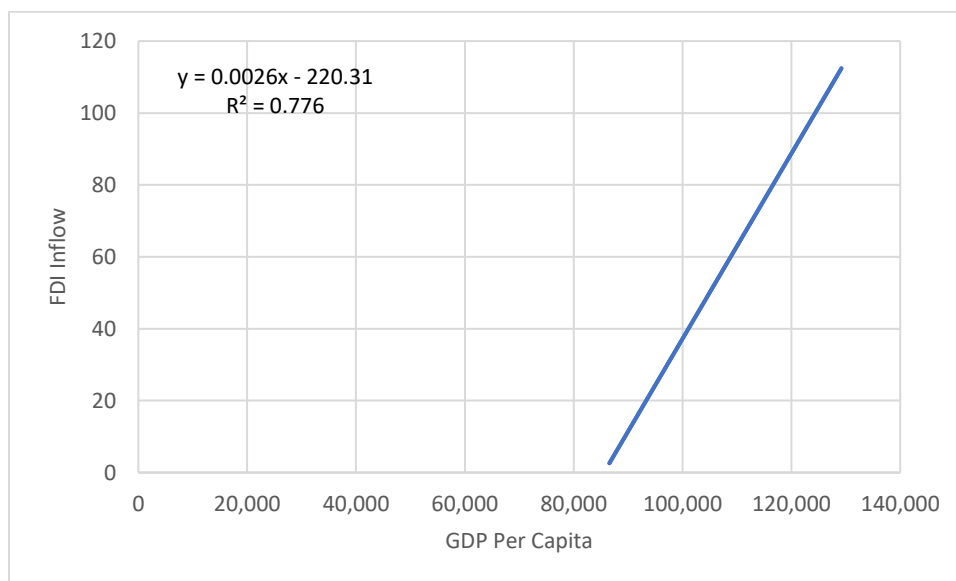


Figure 7.
GDP Per Capita Determining FDI Inflow.

Similarly, the results are shown in Table 3. Kurtosis of -0.52 indicates a flatter distribution with fewer extreme values, while slightly right-skewness (0.20) suggests fewer high values. This could imply periods of economic prosperity or policies that have positively impacted individual incomes.

During the pre-pandemic period, between 2017 and 2019, per capita income increased from \$20,910 in 2017 to \$23,406 in 2019. FDI inflows showed significant fluctuations, peaking in 2018 at \$12.14 billion, followed by a drop to \$3.08 billion in 2019 [34, 46].

GDP per capita decreased to \$20,398 due to the economic impact of COVID-19 in 2020. FDI inflows also dropped significantly to \$1.62 billion. During post-pandemic recovery (2021-2023), GDP per capita rebounded strongly, reaching \$32,500 in 2023 (estimated). FDI inflows surged, with \$23.11 billion in 2021 and \$28.06 billion in 2022, reflecting increased investor confidence and economic recovery [34]. As of the first quarter of 2024, GDP per capita stood at approximately \$37,800, and FDI inflows reached \$39.25 billion, indicating continued growth and attractiveness of the Saudi market [57].

Higher-income levels within a country make it more attractive for foreign investment, likely due to greater purchasing power and market potential. Policymakers might focus on increasing GDP per capita to attract more FDI, which appears to be associated with higher FDI inflows. This analysis highlights the significant impact of income levels on attracting foreign direct investment, suggesting that wealthier economies are more likely to receive higher FDI inflows.

2.9. Government Expenditure

Table 3 suggests that Saudi Arabia's government expenditures have a high average with low variability with a 69.01 standard deviation. The leptokurtic distribution with 0.81 kurtosis indicates a somewhat peaked distribution with frequent extreme values. At the same time, the slight left skewness (-0.82) suggests that lower expenditure values are slightly more common than higher ones. This could imply periods of fiscal restraint or budget adjustments.

Various points are scattered across Figure 8, showing the line of best fit through the points, indicating a positive correlation between government expenditure and FDI inflow. The trend line equation is $y = 0.3681x - 335.6$, where 'y' is FDI Inflow and 'x' is Government Expenditure. The R^2 value is 0.3198, suggesting that approximately 31.98% of the variability in FDI inflow can be explained by government expenditure according to this linear model. Higher government expenditure might indicate better infrastructure, services, and economic stability, making a country more attractive to foreign investors. This can increase FDI inflow, which benefits economic growth and development. This graph highlights the potential impact of government spending on attracting foreign direct investment, which is crucial for financial analysts and policymakers.

However, Ehmaidat and Jajuga [26] indicate a positive impact on FDI. The government's increased spending can enhance the business climate and increase the nation's appeal to overseas investors.

However, the downward slope of the trend line confirms the negative correlation, but the slope is very shallow, indicating a minimal effect. The data points are widely scattered around the trend line, showing significant variability in FDI inflow at different levels of government expenditure. This scatter indicates that the relationship is not strong or consistent.

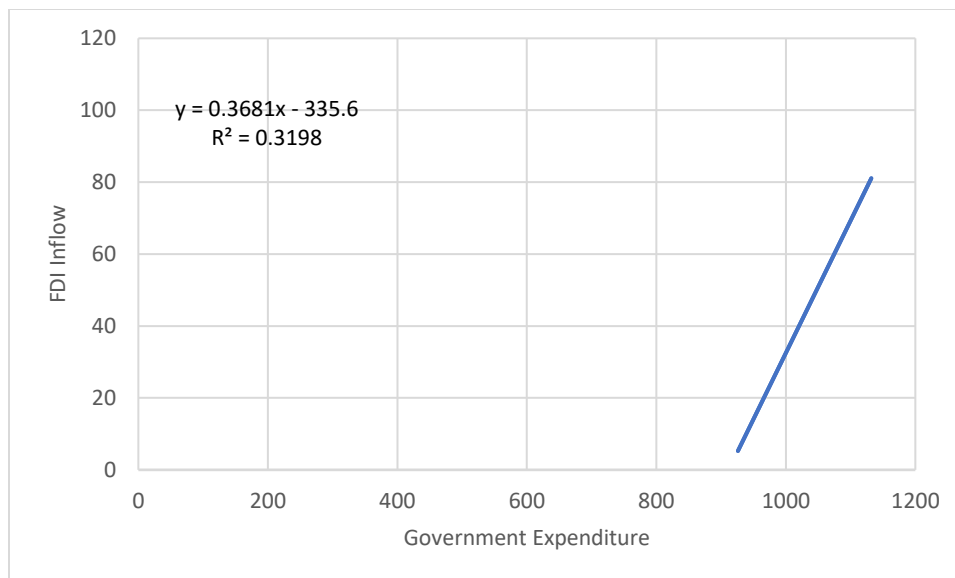


Figure 8.
Govt. Expenditure Determining FDI Inflow.

During 2017-2019 (the Pre-Pandemic Period), Government expenditure increased from \$260 billion in 2017 to \$272 billion in 2019. Similarly, as discussed above, FDI inflows showed significant fluctuations, peaking at \$12.14 billion in 2018 and dropping to \$3.08 billion in 2019 [7, 34, 58].

COVID-19 substantially affected government expenditures in 2020, which surged to \$282 billion. This increase was a direct result of the economic measures implemented to counter the adverse effects of the pandemic.

The very low R^2 value suggests that government expenditure has an insignificant impact on FDI inflow. Other factors are likely to be more influential in determining FDI inflows. Policymakers should consider other variables beyond government expenditure when attracting FDI, as this factor alone does not appear to have a strong influence. This analysis highlights that while there is a slight negative trend, government expenditure does not determine the FDI inflow significantly based on this data.

3. Conclusion

According to the study in this article, foreign direct investment is essential for Saudi Arabia's economic diversification and growth, especially in the years after the pandemic. The analysis results demonstrate a positive relationship between FDI inflows and important economic metrics, including job creation and general economic growth.

Several factors largely determine FDI inflows to Saudi Arabia. Market size emerges as a primary driver, with a large and growing domestic market attracting multinational corporations seeking new opportunities. Trade openness further enhances the Kingdom's attractiveness by facilitating the flow of goods and services, making it an integral part of the global supply chain. The findings highlight that other key determinants, like the growth rate in GDP, rate of inflation, exchange rate, unemployment, per capita income, and government expenditure, are crucial drivers of FDI inflows to the Kingdom. Furthermore, the research reinforces that FDI is positively related to employment generation, underscoring the capacity of FDI to contribute to the Kingdom's economic growth and diversification goals outlined in Vision 2030. However, the study also acknowledges the challenges posed by the global economic landscape, particularly in the aftermath of the epidemics. The decline in international foreign investment flows underscores the need for Saudi Arabia to continuously adapt its policies and strategies to remain an attractive destination for foreign capital.

Finally, the study proved that the FDI is an essential driver of sustainable growth in Saudi Arabia rather than a stand-alone remedy for economic expansion. By creating a business-friendly environment, investing in human capital, strengthening infrastructure, and promoting innovation, the Kingdom can leverage FDI to achieve the goals of Vision 2030 and secure a prosperous future.

4. Recommendations

To further enhance Saudi Arabia's attractiveness to foreign investors in the post-pandemic world, policymakers should consider the following recommendations:

- **Strengthening Institutional Frameworks:** Continuously improve the ease of doing business by streamlining regulations, ensuring transparency, and providing legal certainty for investors.
- **Investing in Human Capital:** Foster a highly skilled workforce by investing in education and training programs aligned with the needs of targeted industries.
- **Promoting Innovation and Technology:** Incentivize research and development activities, support technology transfer, and create an ecosystem that nurtures startups and innovative ventures.
- **Enhancing Infrastructure:** Continue to invest in modern and efficient infrastructure, including transportation, logistics, and digital connectivity, to reduce business costs and to improve competitiveness.
- **Fostering Economic Diversification:** To lessen dependency on oil income, aggressively encourage investment opportunities in non-oil industries like manufacturing, tourism, renewable energy, and technology.
- **Strengthening Global Partnerships:** Forge strategic alliances with other countries and multinational corporations to attract FDI, share knowledge, and promote technological advancements.

Saudi Arabia can accomplish its ambitious economic diversification goals, draw in steady FDI inflows, and improve the attractiveness and resilience of its investment climate by putting these suggestions into practice.

Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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