

Determinants of Foreign Direct Investment in GCC Countries: An Empirical Analysis

Ebrahim Mohammed AL-MATARI¹, Mahfoudh Hussein MGAMMAL²,
Nabil Ahmed M. SENAN³, Adeeb Abdulwahab ALHEBRI⁴

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Abstract

The aim of this paper is to identify the key determinants in the Gulf Cooperation Council (GCC) countries for Foreign Direct Investment (FDI) inflows by using a balanced data panel for the period from 1995 to 2018. This study covers GCC countries in their entirety. The study uses ten explanatory variables, namely, trade ratio, gross domestic product, external balance, fuel exports, gross savings, international tourism, military expenditure, net foreign assets, services value added, and total natural resources. The authors have tried to find the best fit model from the differences methods considered such as OLS, GLS regression with the help of Hausman test, and country by country regressions as additional analysis. The study revealed a significantly positive association between inflation, trade ratio, gross domestic product, gross savings, and net foreign assets with FDI. On the contrary, international tourism was revealed to have a negative association with FDI. The sample of all GCC countries chosen for this study has not been considered widely by any earlier study. Moreover, this study covered many determinants of FDI that add to the previous literature. It is a significant contribution to the current research body and stresses the originality of this paper.

Keywords: Foreign Direct Investment, FDI Inflows, GCC Economies, Panel Data Approach

JEL Classification Code: C23, C33, E31, F3, 011

1. Introduction

While globalization grows, FDI was increasingly regarded for both the development and the developing world

as a significant catalyst for investment and economic growth. While it is not accepted that the advantages of FDI outweigh its side effects, many researchers have found it does. To that end, several countries have drawn up and adopted FDI-friendly policies (Brenton, Di Mauro, & Lücke, 1999; Lipsey, 2004; Meyer, 2004; Meyer & Sinani, 2009; Stiglitz, 2000; Phan & Nguyen, 2020; Ta et al., 2020; Nguyen, 2020; Tung & Thang, 2020). Developing countries provide profit-making opportunities for foreign investors, while FDIs are an important source of foreign fund inflow for developing countries themselves (Arita, 2013). The FDI offers a way to promote the transition of new technology and, thus, reduce the technological gap (TGAP) between developed countries. Most developing countries do not possess a technical ability. Past studies have also shown that FDI provides important platforms for new technology dissemination (Blomstrom & Wang, 1989). FDI also helps to maintain a healthy balance of payment (BOP) account for the GDP of the host country. It also increases employment opportunities, increases the income per person and boosts R&D in the host country. That said, the extent to which a host nation benefits from

¹First Author and Corresponding Author. [1] Associate Professor, Department of Accounting, College of Business, Jouf University, Kingdom of Saudi Arabia [2] Faculty of Commerce and Economics, Amran University, Yemen [Postal Address: Sakakah, Saudi Arabia] Email: ibrahim_matri7@yahoo.com

²[1] Assistant Professor, Department of Accounting, College of Business, Jouf University, Kingdom of Saudi Arabia [2] Faculty of Commerce and Economics, Amran University, Yemen

³[1] Associate Professor, Department of Accounting, College of Business Administration, Prince Sattam bin Abdul Aziz University, Al Kharj, Kingdom of Saudi Arabia [2] Accounting Department, Administrative Science College, Al-Baydha University, Yemen

⁴[1] Assistant Professor, Department of Business Administration, Community College Muhayil, King Khaled University (KKU), Kingdom of Saudi Arabia [2] Ibb University, Yemen

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FDI depends largely on its growth rate. The FDI is an international phenomenon, by its very nature, and probably one of the most important elements, which has led to the global economic globalization. Nonetheless, FDI has grown across countries over the last two decades and has become a sign of globalization (UNCTAD, 2006).

Foreign direct investment has become a key source of economic activity now, and can be used as an index and an important measure of a country's economic growth, as well as the degree of its external relation. However, GCC countries are actively trying to develop policies in line with the expectations of the international investor, and in developing countries trying to have a good investment climate. The Kingdom of Saudi Arabia and the Sultanate of Oman 2040 have been two countries to implement FDI policies. From this perspective, this research paper focuses on the GCC states' role in stimulating foreign direct investment as an economic integration. In addition, the GCC countries have relied on FDI to build employment. For some countries, the FDI Job Vorteil was sponsored. Vacaflores (2011) finds that FDI internally affects job generation in Latin America in a positive and important way, primarily through its effects on the workforce. In countries with high informality and low average FDI inflows, the positive effect is particularly significant. FDI in Central Europe has helped restructure, sustain, and create jobs for the Central European economies (Radosevic, Varblane, & Mickiewicz, 2003). In the Czech Republic, Dinga and München (2010) show the FDI is leading to a 1.7 percentage point reduction in the unemployment rate. FDI leads to jobs creation and economic development in Fiji (Jayaraman & Singh, 2007). GCC countries have drawn inward FDI flows to understand the benefits of FDI jobs. FDI net inflows of 53 billion dollars to the GCC countries in 2008 compared with 1.5 billion dollars in 2001. It decreased however in 2015 to US\$14 billion (Mina, 2020).

This paper applies various variables to understand whether institutions are a strong determinant of GDC flows in the GDI: inflation, trade ratio, domestic gross product, external balance, fuel exports, gross savings, international tourism, military spending, net foreign assets, and total natural resources. The study analyzes the role of traditional factors and institutional variables. Whereas the past surveys (Adnan, Chowdhury, & Mallik, 2019; Ali, Faki, & Suleiman, 2018; Barteková & Ziesemer, 2019; Cristina & Ioana, 2020) attempted to classify the primary determinants of the FDI, no consensus appears to have been reached. The study uses a disbanded FDI data collection by six major investor countries (Saudi Arabia, United Arab Emirates, Bahrain, Oman, Kuwait, and Qatar). Therefore, no set of explanatory variables, which can be considered to be "real" FDI determinants, is widely recognized.

In this context the relationship between FDI and various problematic variables (i.e., GDP, export debt, trade

transparency, inflation) has been very vulnerable to minor changes in the knowledge collection. In addition, those factors were both negative and positive (Dondashe & Phiri, 2018; Kumari & Sharma, 2017; Saini & Singhania, 2018). Prior to investment, the conditions underlying which host country will be invested in are decided by international investors. In further work (Adnan et al., 2019; Balan, 2019; Botello & Vargas, 2018; Dike, 2018) proposed more variables that will increase the influxes of FDIs and boost the determinants of FDI. This led to an examination of new variables in the current study. These parameters may include many factors, namely, availability of natural resources, geographical location suitable, promising size of the market, healthy cultural and political scenario, low transport and labor cost, and favorable public and economic policies. Investors attempt to decide accurately whether investments in another country are needed as a crucial financial decision. This research aims to establish significant determinants in developed countries for FDI inflows. The study examined for this purpose FDI inflow data for the period 1995–2018 in a number of developing countries, including GCC countries. The less popular methods (fixed and random effects) have been implemented. Therefore, it was tested by Hausman (1978) to determine the best pattern.

This study goes beyond previous studies that discussed the determinants of foreign direct investment in some countries, whether in developed or developing countries (Abdul Hadi, Zafar, Iqbal, Zafar, & Iqbal Hussain, 2018; Adnan et al., 2019; Ali et al., 2018; Balan, 2019; Barteková & Ziesemer, 2019; Canh, Binh, Thanh, & Schinckus, 2020; Cieřlik, 2020; Cristina & Ioana, 2020; Dondashe & Phiri, 2018; Erfani & Berger, 2020; Grujic & Kyrkilis, 2020; Kumari & Sharma, 2017; Papageorgiadis, Xu, & Alexiou, 2019; Saini & Singhania, 2018; Shah, 2018; Tintin, 2013). These studies discussed the determinants of traditional foreign direct investment such as GDP, external indebtedness, trade openness, and inflation (Adnan et al., 2019; Ali et al., 2018; Barteková & Ziesemer, 2019; Cristina & Ioana, 2020), but there are previous experimental studies that recommended to expand the scope of research on determinants. Others have direct significance and influence on foreign direct investment (Adnan et al., 2019; Asiamah, Ofori, & Afful, 2019; Balan, 2019; Botello & Vargas, 2018; Cieřlik, 2020; Dike, 2018; Erfani & Berger, 2020; Sharma & Mandeep, 2013).

Accordingly, this study sought to expand on the determinants of investment, and the determinants that affect foreign investment within the Gulf Cooperation Council countries were chosen. Second, the study sought from the beginning to focus on finding variables that will benefit the previous and future studies, which in turn will have an important role in strengthening experimental contributions. Third, the study uses an unbundled FDI dataset by country of investors. This helps us to recognize gaps between

investors and countries, which in many studies have been left unanswered.

In this context, policymakers should understand and take action to draft policies that attract FDI, the importance of the major determinants of FDI cited in our paper. It will cover market size for the developing countries, make foreign trade laws more compatible and invest in human resources of GCC countries, because this paper's findings have major ramifications for politicians, executives and investors. GCC member states should adopt ambitious policy measures to ensure more resource-seeking opportunities for the FDI. GCC countries are required to promote FDI into the non-resource sector and to reduce reliance on resources by means of variations. This would help increase the likelihood of resource-rent decline and market volatility in oil prices, resulting in an overall decrease in the amount of inward FDI invested in the study country of GCC. In addition, steps should be taken to maintain stable interest rates and inflation levels, because FDI is influenced by these variables.

The remainder of this paper is organized as follows. Section 2 reviewed the earlier literature as well as the trend in FDI flows in the GCC overall in the 1995–2018 period. The analytic approach is presented in Section 3. The methodological and explanation of findings is explained in Section 5.

2. Literature Review

Studies have found that the flow of foreign investment has a good effect on improving the economy over the years of the study of the variables which impact the flow of FDI and its impact on improvement of the economy (Kumari & Sharma, 2017; Tintin, 2013). Nonetheless, it is not true that the matter has been found to be constant in relation to the foreign investment flow, where previous studies have shown that relations with foreign investment determinants differ (Balan, 2019; Baskoro, Hara, & Otsuji, 2019; Dondashe & Phiri, 2018; Li & Luo, 2018; Saini & Singhania, 2018). Such research sought to analyze various FDI determinants across different countries worldwide.

Prior studies have provided mixed results exploring the link between FDI inflows and its determinants. A large number of studies (Abdul Hadi et al., 2018; Adnan et al., 2019; Balan, 2019; Canh et al., 2020; Cieřlik, 2020; Cristina & Ioana, 2020; Dondashe & Phiri, 2018; Erfani & Berger, 2020; Kumari & Sharma, 2017; Papageorgiadis et al., 2019; Saini & Singhania, 2018; Shah, 2018; Tintin, 2013) have been trying to define, clarify and use time series, cross section and data panel data to identify the various determinants of FDI, and how these influence the flow in different countries (Abdul Hadi et al., 2018; Adnan et al., 2019; Ali et al., 2018; Balan, 2019; Barteková & Ziesemer, 2019; Belgibayeva & Plekhanov, 2019; Cristina & Ioana, 2020; Dondashe & Phiri,

2018; Erfani & Berger, 2020; Saini & Singhania, 2018; Sharma & Mandeep, 2013; Tintin, 2013). These set tests in a range of developing countries (West, North, Mid-East, South-East, South Africa, Brazil, Russia, China and South America, EU). Inflation, commercial connection, gross domestic product, gross savings, exchange rates, market size, and commercial accessibility are the most significant factors of FDI stated in the literature. In addition, these studies used different years and methods to determine the relationship between FDI determinants. Finally, there have been significant results from all previous empirical research. The goal of the current study is, thus, in addition to introducing good variables that help to complement the theme literature that enhance the determinants of foreign investment, to reexamine some of the determinants of foreign investment in GCC countries. Some previous studies examining FDI determinants were provided in the next section.

3. Research Method

3.1. Data Collection

The study data was gathered from the World Bank website (<https://2u.pw/4W5YI>), and the focus was on the GCC economies because of their global importance as well as its significance to the Middle East in particular. Data was collected for the determinants of FDI in the GCC during the period 1995 to 2018.

3.2. Influential Observations and Outliers

Influent findings are those findings that, due to threats from contingent or independent variables, suspiciously inclined toward one or more sides of the regression estimates. For descriptions, a studentized residual was employed in this article to classify descriptions of the figures (Hair et al. 2013). In addition, other variables, including market flexibility, international balances, were omitted from this paper because they have a high VIF value.

3.3. Measurement of the Variables

This part provides the measurement method used on the variables as listed in Table 2.

3.4. Estimation Model Development

The outcome was obtained through the use of GLS regression that was conducted on the association between FDI determinants and FDI inflow in GCC economies over 43 years (1976 to 2018). This study used GLS regression (random effects) to run the impact of FDI determinants on FDI inflow. This study like previous studies used GLS

Table 1: Some Studies Related to Determinants of FDI

Author	IVs	DV	Sample Size	Methods	Results
Kumari and Sharma (2017)	elements of FDI inflows	FDI inflows	20 developing countries, 1990 to 2012	GLS regression	They find that there are major relationships with FDI in market size, free trade, interest rates and return on human resources.
Tintin (2013)	drivers of FDI inflows	FDI inflows	6 Central and Eastern European countries during 1996–2009	GLS regression (fixed effects)	He shows that the position of GDP, trade openness, EU membership, and institutions and FDI inflows are closely linked.
Saini and Singhania (2018)	elements of FDI	FDI inflows	20 countries (11 developed and 9 developing countries) over the years from 2004 to 2013	GLS regression	It was shown that real GDP growth, per capita income, domestic inflation, commercial interest rates, free trade, the exchange rate and external debt and FDI are significantly related.
Dondashe and Phiri (2018)	FDI determinants	FDI inflows	South African economy, 1994 and 2016	ARDL model	They found a significant correlation between per capita GDP, inflation rates, the size of government, real interest and trade and FDI inflows.
Shah (2018)	FDI determinants	FDI inflows	Latin American & Caribbean (LAC) countries	GLS regression (fixed effect methods)	The study found that the relationship between economic growth, infrastructure and the availability of human capital, macroeconomic stability and FDI was positive.
Cristina and Ioana (2020)	FDI determinants	FDI inflows	Romania, 1991 to 2006	OLS regression	The relation between exports and imports is negligible and economic growth has not affected FDI.
Barteková and Ziesemer (2019)	FDI determinants	FDI inflows	27 European Union countries, 2003 to 2013	GMM regression	The study reported significant difference in electricity price variance between countries.
Ali, Faki, and Suleiman (2018)	determinants of FDI Inflows	FDI inflows	SADC member countries, 1995–2016	OLS (pooled OLS) regression	They have shown that the relationship between infrastructure, trade and market transparency and flows of FDI is positive.
Adnan, Chowdhury, and Mallik (2019)	determinants of FDI Inflows	FDI inflows	in four major South Asian economies (i.e., Bangladesh, Pakistan, India and Sri Lanka), 1975–2016	auto-regression	They found a significantly positive relation with the inflows in the principal variables of FDI.
Balan (2019)	determinants of FDI Inflows	FDI inflows	the Middle East and North Africa and Turkey, 1984 to 2014	GLS regression	Their result showed that investments profile, return on equity, delays in payments, lower religious tensions and lower current account risk points, as well as greater FDI flow rates, are closely related.

Table 1: (Continued)

Author	IVs	DV	Sample Size	Methods	Results
Papageorgiadis, Xu, and Alexiou (2019)	Determinants of FDI Inflows	FDI inflows	23 European countries	GMM regression	The relationship between IP and FDI has been good.
Abdul Hadi, Zafar, Iqbal, Zafar, and Hussain (2018)	Determinants of FDI Inflows	FDI inflows	6 Asian countries, 2001 to 2016	GLS regression (Fixed Effect)	The study utilized Fixed Effect to link FDI to FDI factors. In terms of the primary FDI determinants, the authors published mixed results.

Table 2: Measurement of the Variables

Variable name and Abbreviation	Operationalization and data Source
Foreign direct investment (FDI)	Log of Foreign direct investment, net inflows, Source: http://data.worldbank.org/ ;
Inflation (INFL)	Measured as the annual percentage change in consumer. Source: http://data.worldbank.org/ ;
Trade ratio (TR)	It measured by the ration of Trade to GDP). Source: http://data.worldbank.org/ ;
Gross Domestic Product (GDP)	The logarithmic value of Gross Domestic Product of host country. Source: http://data.worldbank.org/ ;
External balance (EXLBA)	It measured by External balance on goods and services (% of GDP), Source: http://data.worldbank.org/ ;
Fuel Exports (FUEX)	It measured by calculated ration of Fuel exports from of merchandise exports. Source: http://data.worldbank.org/ ;
Gross Savings (GRSA)	It measured by calculated ration of gross savings to GDP. Source: http://data.worldbank.org/ ;
International tourism (INTOU)	Log of International tourism, number of arrivals, Source: http://data.worldbank.org/ ;
Military Expenditure (MILIEX)	It measured by calculated ration of military expenditure to GDP, Source: http://data.worldbank.org/ ;
Net foreign assets (NEFOAS)	Log of Net foreign assets, Source: http://data.worldbank.org/ ;
Services, value added (SEVAD)	It measured by Services, value added (% of GDP), Source: http://data.worldbank.org/ ;
Total natural resources (TONARE)	It measured by Total natural resources rents (% of GDP), Source: http://data.worldbank.org/ .

regression (Ali et al., 2018; Baskoro et al., 2019; Cristina & Ioana, 2020; Jaworek, Karaszewski, & Szałucka, 2018; Kumari & Sharma, 2017; Olofin, 2019; Tintin, 2013).

$$\text{Model: FDI} = \beta_0 + \beta_1 \text{INFL} + \beta_2 \text{TR} + \beta_3 \text{GDP} + \beta_4 \text{EXLBA} + \beta_5 \text{FUEX} + \beta_6 \text{GRSA} + \beta_7 \text{INTOU} + \beta_8 \text{MILIEX} + \beta_9 \text{NEFOAS} + \beta_{10} \text{SEVAD} + \beta_{11} \text{TONARE} + \varepsilon_i$$

Where are:

FDI: Foreign direct investment, INFL: Inflation, TR: Trade ratio, GDP: Gross Domestic Product, EXLBA:

External balance, FUEX: Fuel exports, GRSA: Gross savings, INTOU: International tourism LOG, MILIEX: Military expenditure, NEFOAS: Net foreign assets LOG, SEVAD: Services, value added, TONARE: Total natural resources, ε_i : Error

3.5. Model Specification Tests

We examine the attendance of unnoticed time and country effects, which rise in inconsistent and endogeneity OLS estimates. Also, we examine for endogeneity utilizing

the Durbin-Wu-Hausman and Wu-Hausman tests. The 0-hypothesis is NOT rejected as there are incidence of panel level heteroscedasticity, inside cross-sectional dependence and panel autocorrelation. The effect of world oil prices on the GCC nations likely increases cross section dependence. We examine for autocorrelation utilizing the F-exam, for cross sectional dependence utilizing the Frees exam, and for heteroscedasticity utilizing the LR exam. The 0-hypothesis for the Wooldridge, F-exam is the occurrence of no first-order autocorrelation and for the LR exam is the occurrence of homoscedasticity. The 0-hypothesis of the Frees exam is cross sectional independence. The model tests show heteroscedasticity ranking, where the differences are non-persistent, as a result of which heteroscedasticity was addressed by employing standard errors as suggested by prior studies (Eicker, 1963; Huber, 1967; White, 1980). The fitting model selected should be tested in order to approve that assumptions of multiple regressions are encountered and to assurance that misleading outcomes are evaded. In this setting, choice of the appropriate model depends on some tests and assumptions (Greene, 2003; Gujarati, 2011).

3.6. Selecting Between Pooled OLS Regression and Random Effect

The Breusch-Pagan-Lagrangian-Multiplier examination for random effects (LM) helps in choosing between the random-effect model and the OLS regression (constant coefficients model). In Table 3, the outcome of the LM exam is insignificant. So, there is no evidence of significant differences across years and the null hypotheses are not rejected. It is concluded that the random effect model is not suitable; consequently, OLS regression can be run for this study (Breusch & Pagan, 1980; Gujarati, 2011).

3.7. Selecting Between Fixed Effects and Random Effects

The Hausman examination is utilized to examining whether or not a correlation occurs amongst the error term and the explanatory variables (Baltagi, 2008). In case the p -value is produced, the null hypothesis is forbidden; the appropriate model is the fixed effect otherwise. The Hausman test was thus conducted, with Tobin-Q test, and the two models were NOT important and, thus, the null hypothesis was NOT excluded. Based on the test, a random effect is the suitable regression that can be run for data analysis.

Table 3: Breusch and Pagan Lagrangian Multiplier Test

chibar2(01)	0.00
Prob > chibar2	1.0000

3.8. Diagnostic Tests

In order to successfully conduct a selected model in the study, regression diagnostics examinations were carried out to confirm that assumptions of logistic regressions were met for all variables and to avoid confusing findings.

3.9. Multicollinearity

The results of the Pearson Correlation investigation of determinants of FDI in GCC during 1976–2018 are shown in Table 6, as is the correlation matrix developed for the variables. The outcomes indicate a lack of significant correlations among the independent variables. As for the correlation coefficients analysis, if a high statistical coefficient of correlation matrix was found at 0.9 and over, this shows considerable collinearity (Hair Jr, Black, Babin, Anderson, & Tatham, 2010). The matrix (refer to Table 5) indicates no multicollinearity as there is no significant correlations (over 0.90) among the variables in the model. Hence, the matrix evidences no issue of multicollinearity in the study model.

3.10. Heteroscedasticity

According to Hair et al. (2010), among the violations in regression analysis of cross-sectional data is heteroscedasticity as this leads to higher t and f values, and in turn, the high tendency to reject the null hypotheses, which would otherwise be acceptable. This shows that the IVs do not consistently explain the variation in the DV, limiting the way the impacts of the regressor are interpreted. Therefore, in the present study, the author ran two heteroscedasticity tests to detect the issue, and they are Breusch and Pagan (1979) and Cook and Weisberg (1983) tests. The model tests show heteroscedasticity ranking, where the differences are non-persistent, as a result of which, heteroscedasticity was addressed by employing standard errors as suggested by prior studies (e.g. Eicker, 1963; Huber, 1967; White, 1980). Table 6 presents the results obtained from the heteroscedasticity and autocorrelation tests, and from the table, it is evident that Prob > chi2 does not exceed 5% and thus, the issue

Table 4: Selecting between Fixed Effects and Random Effects

Hausman Specification Tests	
Wald chi2 (16)	53.13
Prob > chi2	0.000
Hausman fixed random/ Prob > chi2	17.30 (0.0680)

Table 5: Pearson Correlation (obs = 144)

Variable	1	2	3	4	5	6	7	8	9	10	11
FDI	1.000										
INFL	0.164	1.000									
TR	0.405	−0.010	1.000								
GDP	0.204	0.259	−0.029	1.000							
EXLBA	0.114	0.384	0.125	0.199	1.000						
FUEX	−0.358	0.103	−0.620	0.076	0.153	1.000					
GRSA	−0.005	0.250	−0.340	0.234	0.622	0.414	1.000				
INTOU	0.146	−0.082	0.378	−0.136	−0.069	−0.260	−0.334	1.000			
MILIEX	−0.203	−0.177	−0.345	−0.276	−0.496	0.059	−0.355	−0.054	1.000		
NEFOAS	0.116	−0.022	−0.255	−0.012	0.091	0.126	−0.016	0.486	0.142	1.000	
TONARE	−0.278	0.267	−0.544	0.111	0.508	0.594	0.520	−0.272	0.147	0.236	1.000

Notes: The definition of variables explained in Table 2.

Table 6: Tests of Heteroskedasticity

chi2(1) = 4.84	Prob > chi2 = 0.0279
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of heteroscedasticity and autocorrelation exist. Moving on to the panel dataset, it covers duplicated observations that were placed on similar autocorrelations (Wooldridge, 2010), necessitating the carrying out of autocorrelation test for the identification of potential issues in first order time-series autocorrelation. Based on the test outcomes, no issue of autocorrelation was revealed in the models.

4. Results

4.1. Descriptive Statistics

This section highlights the continuous sample's variables of the model and the dichotomous descriptive statistics. To identify the situation of separately construct (DV & IV), descriptive statistics, e.g., standard deviation and mean, were utilized as a way of clarification. This is an effort to understand and deliberate the results obtained from descriptive for the IVs, moderator variables and control-variables.

The calculated Foreign direct investment is 2.53 (refer to Table 7), indicating that the mean of the INFL, TR, GDP, EXLBA, FUEX, GRSA, INTOU, MILIEX, NEFOAS and TONARE are 4.990, 104.066, 3.980, 18.591, 77.433, 34.681, 5243230, 6.149, 2.34E+11 and 29.387, respectively. With a maximum (minimum) of INFL, TR, GDP, EXLBA, FUEX, GRSA, INTOU, MILIEX, NEFOAS and TONARE

are 33.566 (−3.152), 33.752 (−25.958), 191.878 (47.181), 26.170 (−14.765), 48.452 (−8.617), 112.898 (−5.507), 108.460 (0.000), 1.83E + 07 (279000), 14.311 (−0.602), 2.88E+12 (−9.10E + 10) and 62.047 (3.227), respectively. Moreover, this section provided other test like VIF and as provided in Table 7, the varied is between 0.219 to 0.838, whereas the values of VIF between 1.19 to 4.57. So, in regards the finding that there is no multicollinearity issue as mentioned by Hair Jr et al. (2010).

4.2. FDI OLS Regression

Empirical outcomes beginning with the crucial pooled OLS approximations. The columns in Table 8 indicate that Inflation (INFL), Trade Ratio (TR), Gross Domestic Product (GDP), External Balance (EXLBA), Gross Savings (GRSA), and Net Foreign Assets (NEFOAS), in entirely arrangements, R2 designates that the observed model describes between one-third and one quarter of the difference in FDI. F-exam statistics propose joint-coefficient significance and positive statistically significant on the flows of FDI to GCC nations. In contrary, International Tourism (INTOU) influence is negative and statistically significant on the flows of FDI to GCC nations. Surprisingly, however, is the negative influence of International Tourism (INTOU) on FDI flows. In three specifications – External Balance (EXLBA), Fuel Exports (FUEX) and Total Natural Resources (TONARE) impact is negative and statistically insignificant on FDI flows to GCC nations. Differently, Military Expenditure (MILIEX) has statistically positive insignificant impact signifying that sincerity to trade and FDI drive in tandem in the GCC nations.

Table 7: Descriptive Statistics and Multicollinearity Test (obs = 144)

Variable	Obs	Mean	Std. Dev.	Min	Max	VIF	1/VIF	skewness	kurtosis
Foreign direct investment (FDI)	144	2.526	3.811	−3.152	33.566	–	–	−0.910	3.642
Inflation (INFL)	144	4.990	11.103	−25.958	33.752	1.25	0.800	−0.527	3.567
Trade ratio (TR)	144	104.066	31.685	47.181	191.878	3.94	0.254	0.887	2.988
Gross Domestic Product (GDP)	144	3.980	5.335	−14.765	26.170	1.19	0.838	−0.973	4.818
External balance (EXLBA)	144	18.591	12.831	−8.617	48.452	4.57	0.219	0.216	2.625
Fuel Exports (FUEX)	144	77.433	22.748	−5.507	112.898	2.06	0.485	−1.909	6.793
Gross Savings (GRSA)	144	34.681	25.624	0.000	108.460	2.76	0.362	0.713	3.387
International tourism (INTOU)	144	5243230	4461240	279000	1.83E+07	2.27	0.440	−0.534	2.413
Military Expenditure (MILIEX)	144	6.149	3.132	−0.602	14.311	2.25	0.444	0.166	2.489
Net foreign assets (NEFOAS)	144	2.34E+11	5.98E+11	−9.10E+10	2.88E+12	2.19	0.458	0.379	2.172
Total natural resources (TONARE)	144	29.387	15.456	3.227	62.047	3.91	0.255	−0.076	2.065
Mean VIF						2.64			

Table 8: Test of OLS Regression

Variable	OLS regression
Inflation (INFL)	0.010 (2.06) **
Trade Ratio (TR)	0.011 (3.55) ***
Gross Domestic Product (GDP)	0.276 (1.76) *
External Balance (EXLBA)	−0.006 (−0.75)
Fuel Exports (FUEX)	−0.004 (−1.18)
Gross Savings (GRSA)	0.008 (2.41) **
International Tourism (INTOU)	−0.367 (−2.2) **
Military Expenditure (MILIEX)	0.016 (0.65)
Net Foreign Assets (NEFOAS)	0.284 (4.04) ***
Total Natural Resources (TONARE)	−0.010 (−1.62)
_cons	−1.439 (−1.51)
Prob > F	0.0000
R-squared	0.3919
Adj R-squared	0.3286
Root MSE	0.5251

Notes: The significant of level as follows: *, **, *** are less than 0.1, 0.05 and 0.01 respectively.

5. Discussion

Testing hypotheses revealed some results, which may improve our knowledge. This study was confined to KSA because of its great importance in creating a good environment that helps attracting foreign investments. Accordingly, the study was used to analyze the association between the IVs and the DV by using OLS regression.

The economies of GCC were subjected to the worldwide business sequence in 2007–2016. The sequence demonstrated itself in global FDI streams weakening. For example, Figure 1 displays, global FDI flows tracked a descending trend in 2007–2014. Mina (2020) approved the drop in inwardly FDI streams in the GCC nations. Notwithstanding the worldwide drop in inwardly FDI streams, the exceptional characteristics of the GCC nations, in precise the UAE and the KSA, lured FDI streams (Gygli, Haelg, Potrafke, & Sturm, 2019).

Studies measured inflation rate using the wholesale price index and consumer price index (CPI) (Buchanan Allen, 2011; Buchanan Bonnie, Le, & Rishi, 2012; Mgamal, 2012). Regularly, small rates of inflation are required as low inflation rates signify optimistic growth of economic and contrariwise. Balasubramanyam (2002)

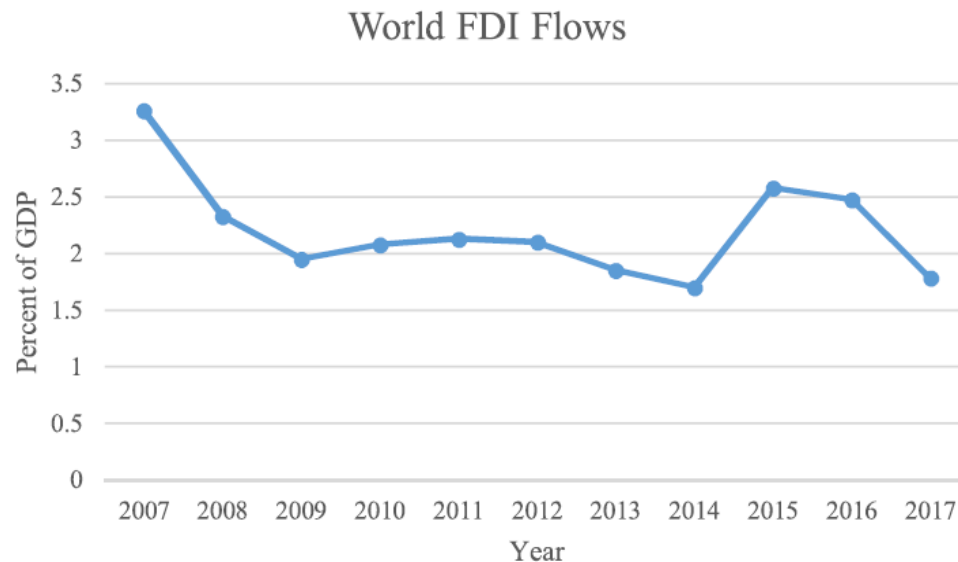


Figure 1: Data Source: UNCTAD

argued that a lower rate of inflation signifies the economy's strength and solidity as one of the utmost important factors in drawing FDI. Organizations engaging in global trade incline to demonstrate more technologically and advanced productive than organizations functional only in a local market. Nevertheless trade provides the capability to rapidly change technology entrenched inside physical goods, FDI provides the possible to transfer the knowledge and physical goods, processes and skills, to operate or produce them (Pigato et al., 2020).

Vinesh, Boopendra, and Hemraze (2014) posit that one of the noteworthy determinants of FDI for Southern African Development Community is gross domestic product. Asiamah et al. (2019) found that equally the short-run and long-run results are positively and statistically important effects of gross domestic product on FDI in Ghana and the Granger causality examination outcomes exposed a flow unidirectional connection between log of GDP and FDI. Larbi-Siaw, Donkor, and Dankwah (2016) found that external balance on trade and FDI are found not to significant statistically suggesting that these factors in the short run do not have any orderly impact on growth of economic.

Natural resources are a confident impactor on FDI outward of Chinese (Akhtaruzzaman, Berg, & Lien, 2017; Buckley et al., 2007; Chang, 2014; Kolstad & Wiig, 2012; Ramasamy, Yeung, & Laforet, 2012; Zhang, Chen, & Feng, 2014) and FDI inward in Africa (Asiedu, 2013). Though, natural resources are found to have an undesirable impact on FDI inward to the BRICS nations (Jadhav, 2012). It is believed that an increment in reserves in emerging nations through the dynamics shaped by FDI permits the state to have

funds availability to invest in productive activities directing to growth of economic (Adames, 2000). Findings indicate that the influence of international tourism on FDI was undesirable, which means that in long and the short run, our outcomes designate a unidirectional fundamental association between growth of the economy and arrivals of tourist, FDI of non-tourist and FDI of tourist in GCC countries.

Aziz and Khalid (2019) results indicated that expenditure of military, in the non-appearance of armed conflict, decreases inflow of FDI. Contrary with above studies we found the influence of expenditure of military on FDI remained insignificant among GCC countries. Inflow of FDI in reply to lower expenditure of military is lower for the GCC countries because they do not face high armed conflict. Cyrus, İşcan, and Starky (2006) suggested that nations with high FDI liabilities levels are inclined to have a strong regulation and a strong protection of shareholder, whereas nations with high net foreign assets stocks are inclined to have a strong creditor protection.

Asiedu (2013) found that natural resources have a negative impact on FDI and that the FDI source curse perseveres even afterward directed to the institutions quality and other vital FDI factors. Lu, Kasimov, Karimov, and Abdullaev (2020) recommend to reveal that increased comparative advantage in territorial coastlines.

6. Conclusion and Limitations

This study aimed to explore the determinants of FDI in GCC, a developing region, and its market over 24 years, from 1995 to 2018. Such exploration was conducted using ten

explanatory variables (trade ratio, gross domestic product, external balance, fuel exports, gross savings, international tourism, military expenditure, net foreign assets, services value added, and total natural resources). The researchers selected the best model by reviewing previous studies, and formulated the study model with the OLS method using pooled data, and using differences analysis so as to select a fit model. The study revealed a significantly positive association between inflation, trade ratio, gross domestic product, gross savings and net foreign assets with FDI. On the contrary, international tourism was revealed to have a negative relationship with FDI. The rest of the variables have no significant association to FDI (i.e., fuel exports, gross savings, military expenditure, and total natural resources).

This study has some implications; firstly, the article adds to our knowledge about the FDI in GCC countries through explanatory variables (trade ratio, gross domestic product, external balance, fuel exports, gross savings, international tourism, military expenditure, net foreign assets, services value added and total natural resources). Secondly, our findings have important policy implications for managers, investors and policymakers. GCC members should follow operational policy enterprises to secure more advantages from seeking resource FDI. Thirdly, these members must inspire FDI into the non-recourse sectors and decline resource dependence through variation. These will aid to alleviate the hazards related with the reduction of fluctuation of oil prices and resource rents, which might make big investments in the extractive industry less required and guide to a general deterioration in inward FDI in GCC countries under study.

Additionally, action could be held to preserve inflation rates and interest rates as these elements have been discovered to affect FDI. Finally, policymakers should comprehend the status of the main factors of FDI and take action to articulate policies that motivate FDI. This could make rules more attractive to investment and international trade-friendly, and develop the size of market in the GCC countries' capital of human. Finally, this paper has some restrictions, first its concentrated solely on the GCC economy. As such, future research could explore variables among the developing countries. Second, this study covered 24 years, so it is suggested that future research should cover a longer period. Finally, this study adds some value such as market openness, lending interest rate, natural gas rents, new businesses registered, oil rents and so on to the literature, so future studies should examine additional determinants of FDI for further enhancement of FDI.

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