An empirical investigation on the effects of the fiscal and monetary policies on the domestic and foreign direct investment in Saudi Arabia for the period 2010–2018

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Abstract: Foreign direct investment is currently one of the main pillars in achieving development and economic growth, due to its important position in the economies of the countries of the world. The aim of this research is to study the impact of Fiscal and monetary policy in Saudi Arabia on attracting foreign investment for the period 2010–2018. The researcher used the multiple linear regression to test the research hypothesis. Linear regression is used to investigate the impact values by each predictor variable. The study covered the period 2010–2018, the present study chose independent variables monetary policy tools in Saudi Arabia that include (Money supply (M2), Monetary cash reserve and Exchange rate), also the present study chose fiscal tools that include (taxation and government capital spending). The Dependent Variables includes (Direct Domestic Investment and Foreign Direct Investment). E-views (version 10) software package was utilized for this purpose. Multiple linear regression was performed to test models. The results show that Money supply, Monetary cash reserve, capital government spending and taxation positively affects the domestic investments, while Exchange rate negatively affects the domestic investments. It was also found that all independent variables positively affect the foreign direct investment.

Keywords: Fiscal Policies; Monetary Policies; Domestic Direct Investment; Foreign Direct Investment; Saudi Arabia.

1. Introduction

Foreign direct investment is currently one of the main pillars in achieving development and economic growth, due to its important position in the economies of the countries of the world, especially after the recent economic events and shifts witnessed by the situation and reflected in the international trade openness and increasing various exchanges including Foreign Direct Investment.

All this change prompted developing countries to correct their situation and improve their economies and to keep pace with developments and integration in the global economy by creating a favorable climate enabling them to attract the greatest possible foreign direct investment in various ways and different methods. Saudi Arabia, like other countries in the world, needs to achieve economic development as a developing country, it seeks to achieve as much as possible in attracting foreign direct investment in the light of its vision (2030).

The Kingdom of Saudi Arabia follows a monetary policy that aims to achieve price stability and support the various economic sectors in line with local and global economic developments, and to support local banks to carry out their financing role in the local economy, through the realization of the realities of the economy. A bill as a complete tool for issuing bills, in order to enhance the management of liquidity levels in the banking system in the short term. The Kingdom of Saudi Arabia continued the cautious expansion of monetary policy with the aim of boosting economic activity and providing low-cost credit to the government and the private sector. The Kingdom of Saudi Arabia has been affected during previous years by a set of factors that required maintaining the monetary policy orientations supportive of economic growth, whether by maintaining the low interest rates that were adopted in the wake of the global financial crisis or the trend to further reduce interest levels in order to allow the facilitation of credit granting processes. And support for economic activity. Therefore, this study came to clarify the impact and effectiveness of fiscal and monetary policy tools on domestic and foreign direct investment.

This can only be achieved through the pursuit of meaningful and successful economic policies. Since fiscal and monetary policies are the most important parts of economic policy, their instruments must be exploited to achieve this goal.

Research problem:

The pursuit of developing countries, including Saudi Arabia, to create an investment climate and increase the attractiveness of investment requires the government to formulate carefully studied economic policies with continuous follow-up in order to ensure the achievement of the objectives set.

What is the impact of Fiscal and monetary policy in Saudi Arabia on attracting foreign investment?

The following sub-questions emerge:

- Has the Kingdom achieved tangible results through measures related to monetary and fiscal policy instruments?
- Which policies are most effective in attracting FDI to the Kingdom?

2. Literature review

Several studies were written in the theoretical side of the issue of fiscal and monetary policy, but a few take the construction of statistical models that explain this relationship and analyze it, as there is no study that relates this relationship to KSA, hereinafter a brief overview of the most important of these studies:

- **Qadri Nuriya, a. Silent Fatima Zahra (2018)** "The impact of fiscal and monetary policy on foreign direct investment in Algeria during the period 1990 – 2016". the research has attempted to study the impact of fiscal and monetary policy on FDI inflows in Algeria during the period 1990/2016 in which it relied on the ARDL model. A range of variables, including government spending, taxes, monetary mass, exchange rate and re-discount rate, have been found to show that government spending and monetary mass contribute to increased foreign investment flows while the exchange rate has limited and minimal effects. Taxes and re-discount rates have an adverse effect on foreign investment flows in Algeria.

- **Abdelhak, Tair Oqba, (2017)** "The effectiveness of fiscal policy in attracting foreign direct investment in Algeria" This study aims to measure the effectiveness of fiscal policy in attracting foreign direct investment in Algeria during the period (1995-2015) by focusing on the index of processing expenses from the expenditure side, and the index of revenues (taxes) by taxes. To achieve a positive and significant relationship at the 5% level between the index of FDI flow and the index of processing expenditures in the long term. There is an inverse and significant correlation at the 5% level between FDI and Revenue Indicators.

- **PAUL NDUBUISI, KALU (2016),** "Government Policy and Foreign Direct Investment Inflows into Nigeria" This study identifies an empirical study of the role of government policy. Particularly in the areas of cash and finance in determining FDI flows in Nigeria (1980-2014). Data on the study were collected from secondary sources and analyzed using the multiple regression method, Johansen's co-integration and error correction mechanisms. The results revealed that there is a negative relationship between FDI and policy variables: inflation rate, foreign exchange rate, government fiscal deficit / surplus, as well as the political risk factor. Based on empirical results.

- **Mustafa Khalifa Thawadi El. Hamoudi (2016),** "The Impact of Fiscal Policy on Investment in Libya (2000-2015)" The study covers the period 2000-2015 and it selects the multiple regression model in a study to evaluate the effect of the fiscal policy on the investment spending by using the gross domestic product, the government spending. In this study, some of the related literature has been discussed and it has been done under three subtitles: a theoretical, experimental and analytical review and study. The study shows that the gross domestic product has a positive effect on the investment spending in Libya and growth in gross domestic product (GDP) will lead to the expansion of investment spending in Libya during the study period (2000-2015).

- **Ateyah M. ALAWNEH and Torki AL-FAWWAZ, (2015)** "The Impact of the Fiscal and Quantitative Monetary Policies on the Domestic" and Foreign Direct Investment in Jordan". The study aims to clarify the impact of quantitative fiscal and monetary policy on domestic and foreign direct investment in Jordan during the period (2000-2011). This study chose the independent variables of monetary policy instruments which include (re-discount rate, mandatory reserve and the open market process). This study also chose financial instruments including government capital expenditures, because they play a big role in the Jordanian economy, the data was analyzed using simple / multiple linear regression method. A negative correlation between the discount rate and the local investment, but it is not statistically significant, while there is a positive and statistically significant relationship between the mandatory cash reserve and the local investment, due to the existence of excess cash reserves in banks in Jordan. There is a positive correlation between government capital spending and domestic investment, which means that fiscal-political effectiveness is greater than that of monetary policies in influencing domestic investment. The second study shows the impact of fiscal and monetary policy on foreign direct investment, and the study showed a statistically negative relationship between the rate of rebate and foreign direct investment, while showed that there is a positive relationship between taxes and foreign direct investment, the reason is that the government gives tax exemptions to encourage foreign direct

investment. This study recommends the adoption of a policy of moral persuasion to guide banks to strengthen their role in domestic investment, as well as the need for fiscal policy in Jordan that provides tax exemptions to encourage domestic investment.

- **Mohamed Lahcen Allawi, Karim Brousha, (2015)**, "The impact of monetary and fiscal policy on the flows of foreign direct investment in Algeria." The objective of this study is to show the effect of monetary and fiscal policy on FDI inflows to Algeria during 1996-2012, using the self-regression model (VAR. Independent variables). Exchange (as monetary policy variables) and fiscal policy (public expenditures) were selected, and the dependent variable was the value of FDI incoming to Algeria. The results show that there is a one-way causal relationship between public expenditure, money mass and discount rate. As well as foreign investment flows in addition, the results show that there is an explanatory power of public expenditure and the monetary mass explaining the change in the value of foreign investment. In general, the results show that there is a positive and significant impact of monetary and fiscal policy on foreign direct investment. Economic.

- **Akpo _et al._ (2015)** tested the impact of fiscal policy on investment expenditure in Nigeria for the period 1970-2010. They found that fiscal policy has a significant impact on investment expenditure. And the Gross Domestic Product and government expenditure have significant impact on investment.

- **Niti Bhasin, (2014)** "The Impact of Fiscal Policy on Foreign Direct Investment Inflows: A Study of India and Select Asian Economies". The study looks at the determinants of FDI flows from selected Asian countries, with particular emphasis on the role of host country fiscal policy in FDI decisions. Data from seven countries, the largest recipients of FDI inflows in the Asian region for the period 1991-2011, were used (two countries, Hong Kong and Vietnam, were excluded because of lack of fiscal policy data). In addition to the traditional determinants of foreign direct investment, this study focuses on the role of fiscal policy variables in influencing FDI, in order to create an enabling environment for investment. Many countries, including India, have redesigned their tax systems to make them internationally competitive, bilateral tax treaties are part of this process to alleviate the problem of international double taxation, and other important variables in fiscal policy are the proportion of government spending that is developmental in nature. Data were analyzed using the least squares method. According to the results of the study, the specific factors that emerged as important are: FDI openness and base structures, where the disparity in FDI openness is important and has a positive significance. Hence, a more liberal and open FDI policy contributes to increased FDI flows into the economy, and the modulus of the base structures is positive, which means that a modern and well-developed infrastructure attracts FDI to an economy. Financial, ie bilateral tax treaties and government expenditures are not significant. This means that fiscal policy variables are not yet included in FDI decision-making. Consequently, fiscal policy variables are almost non-existent. While competitive fiscal policy may facilitate business operations, it is still not a primary consideration in investment decisions.

- **Léonce Ndikumana (2014)** The researcher discussed the effect of monetary policy on domestic investment, especially the lending policy that targets the private sector, as well as the impact on interest rates on South African countries. The results, which were based on a sample of 37 countries during the period 1980-2012, showed a negative impact of monetary policy on domestic investment (through bank lending).

- **Tobias Olweny and Mambo Chiluwe (2012)** The researchers discussed the implications of monetary policy on the private sector and its investments in Kenya during (1996-2009). The researchers found the emergence of an inverse correlation between the rate of treasury bills and the rate of domestic debt on the one hand and investments in the private sector on the other hand, the results showed the emergence of a positive correlation between the money supply and domestic savings on the one hand and investments in the private sector on the other hand.

- **Anja Baum and Gerrit B. Koester (2011)** The researchers addressed the following question: How can fiscal policy affect Germany's economic activity? Through research in the period (1976-2009) and using vector auto regressions (VAR), the researchers found that as spending increases, the fiscal multiplier in the short term will increase at a rate of (0.70), while it was found that the rate is (-0.66) in the case of increasing taxes and the social security contribution.

- **Joshua A. Bello, (2005)** " Fiscal Policy and FDI Growth in Sub-Saharan Africa (Selected Countries Ghana, South Africa, Kenya and Nigeria)". This study assesses the impact of fiscal policy on FDI in sub-Saharan Africa, focusing on selected countries: Ghana, Kenya, Nigeria and South Africa. The study also examines the possibility of expanding FDI in sub-Saharan Africa's economies, including identifying factors (financial or non-financial) that contribute to FDI growth in the region over the long term. This study attempts to contribute to discussions focused mainly on tax incentives. In sub-Saharan Africa, the potential benefits of acquiring the knowledge that these countries hope to acquire and how to achieve it. The study has used the (LMTS) and time series to estimate and analyze historical data for four countries. A choice that represents sub-Saharan Africa for 23 years (1980-2002) The regression results in the combined time series show no evidence that financial incentives have attracted investment to sub-Saharan Africa as a region, but there are differences among nations in the region. Human capital and market size are the most important determinants of FDI growth in

sub-Saharan Africa, supporting previous studies that human capital is essential for technology transfer and promotion of FDI growth. Political stability has also been found to be very important for FDI growth in sub-Saharan Africa, but deficits and tax rates have a negative impact on FDI. Sub-Saharan African governments should review their positions on offering fiscal incentives to boost FDI growth in the region. Sub-Saharan African countries should invest in their people, and policymakers may need to use more dynamic and more consistent policies Technology.

The following table summarizes these studies and its results

Table (1): Summary of a selected literature

Authors/ (year) Study	Methodology used	sample	Study Period	Main Results
Qadri Nuriya, a. Silent Fatima Zahra (2018) "The impact of fiscal and monetary policy on foreign direct investment	ARDL model	Algeria	1990-2016	government spending and monetary mass contribute to increased foreign investment flows while the exchange rate has limited and minimal effects. Taxes and re-discount rates have an adverse effect on foreign investment flows in Algeria.
Abdelhak, Tair Oqba, (2017) "The effectiveness of fiscal policy in attracting foreign direct investment	multiple regression	Algeria	1995-2015	an inverse and significant correlation at the 5% level between FDI and Revenue Indicators
PAUL NDUBUISI, KALU (2016), "Government Policy and Foreign Direct Investment Inflows	multiple regression	Nigeria	1980-2014	a negative relationship between FDI and policy variables: inflation rate, foreign exchange rate
Mustafa Khalifa Thawadi El. Hamoudi (2016), "The Impact of Fiscal Policy on Investment	multiple regression	Libya	2000-2015	the gross domestic product has a positive effect on the investment spending in Libya
Ateyah M. ALAWNEH and Torki AL-FAWWAZ, (2015) "The Impact of the Fiscal and Quantitative Monetary Policies on the Domestic" and Foreign Direct Investment	simple / multiple linear regression	Jordan	2000-2011	a positive correlation between government capital spending and domestic investment, which means that fiscal-political effectiveness is greater than that of monetary policies in influencing domestic investment
Mohamed Lahcen Allawi, Karim Brousha, (2015), "The impact of monetary and fiscal policy on the flows of foreign direct investment	self-regression model (VAR)	Algeria	1996-2012	a positive and significant impact of monetary and fiscal policy on foreign direct investment. Economic.
Akpo et al. (2015) tested the impact of fiscal policy on investment expenditure	-	Nigeria	1970-2010	fiscal policy And the Gross Domestic Product and government expenditure has a significant impact on investment
Niti Bhasin, (2014) "The Impact of Fiscal Policy on Foreign Direct Investment Inflows	least squares method	India and Select Asian Economies"	1991-2011	the specific factors that emerged as important are: FDI openness and base structures, where the disparity in FDI openness is important and has a positive significance, bilateral tax treaties and government expenditures are not significant
Léonce Ndikumana (2014) searched the implications of monetary policy for domestic investment through its impacts on bank lending to the private sector and interest rates	-	37 sub-Saharan African	1980-2012	negative impact of monetary policy on domestic investment (through bank lending).
Tobias Olweny and Mambo Chiluwe (2012) the impacts of monetary policy on private sector investment in Kenya	ISLAM model	Kenya	(1996-2009)	the emergence of a positive correlation between the money supply and domestic savings on the one hand and investments in the private sector on the other hand
Anja Baum and Gerrit B. Koester (2011), the impact of fiscal policy on economic activity over the business cycle – evidence from a threshold	vector auto regressions (VAR) analysis	Germany	(1976–2009)	as spending increases, the fiscal multiplier in the short term will increase at a rate of (0.70), while it was found that the rate is (-0.66) in the case of increasing

				taxes and the social security contribution.
Joshua A. Bello, (2005) " Fiscal Policy and FDI Growth in Sub-Saharan Africa (Selected Countries Ghana, South Africa, Kenya and Nigeria)	(LMTS) and time series	Ghana, South Africa, Kenya and Nigeria	(1980-2002)	no evidence that financial incentives have attracted investment to sub-Saharan Africa as a region, but deficits and tax rates have a negative impact on FDI

Source: Author studies

what distinguishes this study over the above studies is the period that the current study based upon (2010-2018), moreover that this study used statistical quantitative methods and inferential statistics topics, including the hypotheses that were not used by most of the studies mentioned above, making the current research results are of great reliability, because it depends on testing using of sound scientific methods.

3. Research Methodology

The study covered the period 2010–2018, the present study chose independent variables monetary policy tools in Saudi Arabia that include (Money supply), Monetary cash reserve and Exchange rate), also the present study chose fiscal tools that include (taxation[1] and government capital spending)[2]. **The Dependent Variables** includes (Direct Domestic Investment and Foreign Direct Investment).

Independent Variables:
1. **Quantitative Monetary Policy Tools in KSA:**
- **Money supply**

The Saudi Arabian Monetary Agency, SAMA, classifies currency in circulation and demand deposits as the components of the narrow monetary aggregate, namely. The broader monetary aggregate, incorporates monetary assets within as well as less liquid assets such as savings and time deposits (Saudi Arabian Monetary Agency, SAMA).

- **Monetary cash reserve**

It is the minimum value that licensed banks should keep with the Central Bank of Jordan to fulfill the mandatory cash reserves imposed on deposits with licensed banks value (Saudi Arabian Monetary Agency, SAMA).

- **Exchange rate**

In Saudi Arabia, the exchange rate plays a crucial role in monetary policy. It is an important variable for price stability and the balance of payments. Intervention policy under the fixed exchange rate regime is influenced by the level of foreign exchange outflow and the dollar/riyal interest rate differential. This will have direct effects (due to interest arbitraging) and indirect effects (via current account deterioration) on Saudi Arabia's foreign exchange reserves. With perfect asset substitutability, a small change in interest rates results in a large change in reserves, reflecting the general point that there cannot be an autonomous monetary policy in a fixed exchange rate system with perfect asset substitutability.

2. **The fiscal Tools:**
- **Taxation**

Saudi Arabia's direct taxation system includes income tax, withholding tax and zakat, include taxes imposed on income, profits, taxes on financial transactions, taxes on goods and services, taxes on trade and international transactions

- **capital government spending**

refers to expenses that are allocated for the purchase of long-lived assets to create and increase money-kind, example: new construction, maintenance and major repairs are very effective tools in influencing economic growth

Dependent Variables
1. **Direct Domestic Investment:**

It is the spending on fixed capital goods in addition to the change in inventory.

2. **Foreign Direct Investment:**

term as an investment by an investor or enterprises in another enterprises or equivalent in order to get voting power or control by other means outside their geographical boundaries with the target to achieve the investment share and to maximize return

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[1] Non- oil revenue

[2] spending plays a great role in the Saudi economy.

Multiple linear regression used to test the research hypothesis. Linear regression used to investigate the impact values by each predictor variable. E-views (version 10) software package was utilized for this purpose. The source of the data used in the present study is the data base of Ministry of Finance, Saudi Arabian Monetary Agency, IMF, and World Investment Report.

4. Research Hypotheses

Depending on the literature review and economic theory, the present study founds the following alternative Hypotheses:

H_1	There is a negative impact at (0.05) level for Money supply on domestic investment
H_2	There is a negative impact at (0.05) level for Monetary cash reserve on domestic investment
H_3	There is a negative impact at (0.05) level for Exchange rate on domestic investment
H_4	There is a negative impact at (0.05) level for taxation on domestic investment
H_5	There is a positive impact at (0.05) level for capital government spending on domestic investment
H_6	There is a negative impact at (0.05) level for Money supply on foreign direct investment
H_7	There is a negative impact at (0.05) level for Monetary cash reserve on foreign direct investment
H_8	There is a negative impact at (0.05) level for Exchange rate on foreign direct investment
H_9	There is a negative impact at (0.05) level for taxation on foreign direct investment
H_{10}	There is a positive impact at (0.05) level for capital government spending on foreign direct investment

Hypothesis Testing:

The researcher used the multiple linear regression to test the research hypothesis. Linear regression is used to investigate the impact values by each predictor variable. E-views (version 10) software package was utilized for this purpose. The margin error was set in the current research to 0.05. The results were submitted according to the number of dependent variables being involved.

1. Testing the impact on the domestic investments (DI)

Multiple linear regression was performed to test for the first model which handles the domestic investments as a dependent variable. The results are included in the following table.

Table (2): multiple linear regression for estimating the first model (domestic investments)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2	0.057985	0.071431	0.811762	0.5022
MC	4.672501	1.331300	3.509727	0.0725
EXRATE	-4975.829	1108.600	-4.488389	0.0462
TAX	0.319609	0.092334	3.461460	0.0743
GCS	-0.396683	0.059116	-6.710294	0.0215
C	895062.2	102461.1	8.735630	0.0129
R-squared	0.999616	Mean dependent var		782387.3
Adjusted R-squared	0.998655	S.D. dependent var		74781.63
F-statistic	1040.238	Durbin-Watson stat		2.264784
Prob(F-statistic)	0.000961			

(Dependent variable: domestic investments DI)

Table (2) indicates the results of estimating the first model adopted by this research which expressed by the domestic investments (per year) as a dependent variable and the other independent variable mentioned earlier. The data were expressed annually within the period (2010 – 2018). According to the results the f value (1040.238) was considered to be statistically significant as the associated probability value was (0.000961) < 0.05 concluding the model is accepted statistically. Further the adjusted coefficient of determination (explanation) was (0.998655), this value expresses a high percentage of explanation of the variation in the domestic investments by the predictors being used by the model. Concerning the serial auto correlation, the DW test was used, the test result was (2.264784) reflecting no auto correlation issues could be reported as the test value was around the desired reference value (2) and within the range (1.50 – 2.05). the prediction equation for this model was in the form:

$$DI = 0.0579849264269*M2 + 4.67250091641*MC - 0.396682620089*GCS - 4975.82928491*EXRATE + 0.319609425371*TAX + 895062.206545$$

Further the researcher forecasted the values of the domestic investments during the period (2010 -2017), to test for stability in the DI, it was obvious that the bias proportion value was (0.000000) and that the variance proportion was (0.000096) which is very small amount and that the covariance proportion value was (0.999904) which represents a good indication (almost to 1), the results are presented in the following chart.
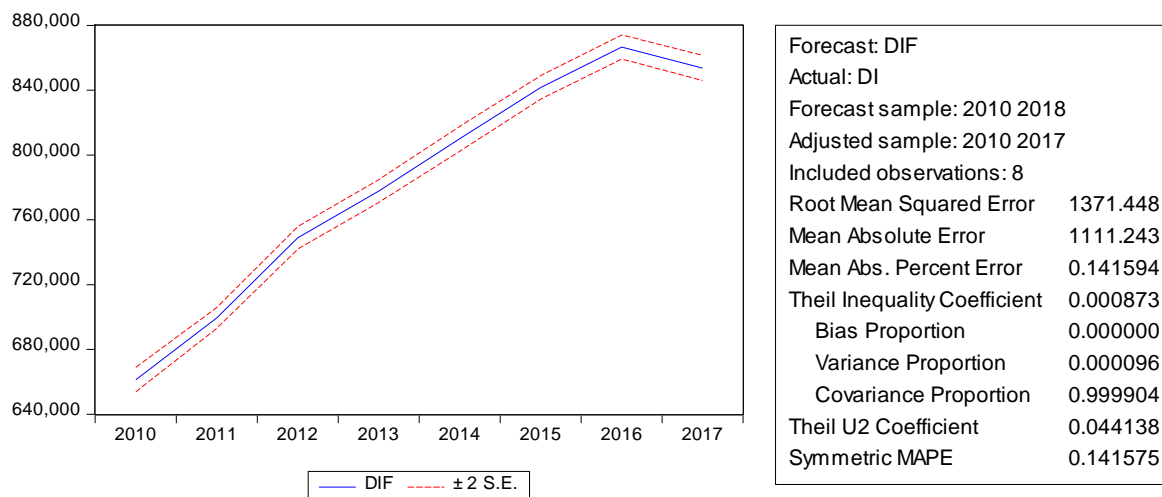
Forecast: DIF	
Actual: DI	
Forecast sample: 2010 2018	
Adjusted sample: 2010 2017	
Included observations: 8	
Root Mean Squared Error	1371.448
Mean Absolute Error	1111.243
Mean Abs. Percent Error	0.141594
Theil Inequality Coefficient	0.000873
Bias Proportion	0.000000
Variance Proportion	0.000096
Covariance Proportion	0.999904
Theil U2 Coefficient	0.044138
Symmetric MAPE	0.141575

Chart (1): Forecasting the domestic investments (DI)

2. Testing the first model (DI) hypothesis

H1: There is a negative impact at (0.05) level for Money supply on domestic investment

The results of multiple linear regression presented by table (1) indicate the impact value for money supply was (0.057985), once this value was a positive, we conclude that money supply positively affects the domestic investments (opposite to the research assumption) such that an increase of (0.057985) by the money supply will lead to an increase by (1.000) in the domestic investments.

The impact value was tested for statistical significance. T-test was used. As could be figured out from the results provided by the table the p value was (0.5022). When comparing this value with the margin error being used in the current research (0.05) obviously this p value was > 0.05 suggesting that the observed impact value was considered to be statistically not significant. As a result, this hypothesis was rejected.

H2: There is a negative impact at (0.05) level for Monetary cash reserve on domestic investment

The results of multiple linear regression presented by table (1) indicate the impact value for monetary cash reserve was (4.672501), once this value was a positive, we conclude that money supply positively affects the domestic investments (inverse to what we postulate) such that an increase of (4.672501) by the monetary cash reserve will lead to an increase by (1.000) in the domestic investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0725). When comparing this value with the margin error being used in the current research (0.05), obviously this p value was > 0.05 suggesting that the observed impact value was considered to be statistically not significant. As a result, this hypothesis was rejected.

H3: There is a negative impact at (0.05) level for Exchange rate on domestic investment

The results of multiple linear regression presented by table (1) indicate the impact value for Exchange rate was (-4975.829), once this value was a negative, we conclude that Exchange rate negatively affects the domestic investments (aligned with the assumption) such that a decrease of (-4975.829) by the Exchange rate will lead to a decrease by (1.000) in the domestic investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0462). comparing this value with the margin error being used in the current research (0.05), obviously this p value was < 0.05 suggesting that the observed impact value was considered to be statistically significant. As a result, this hypothesis was accepted and that the impact direction was negative by the shown value.

H4: There is a negative impact at (0.05) level for taxation on domestic investment

The results of multiple linear regression presented by table (1) illustrate the impact value for taxation was (0.319609), once this value was a positive, we conclude that taxation positively affects the domestic investments (on the contrary of our assumption) such that an increase of (0.319609) by the taxation will lead to an increase by (1.000) in the domestic investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0743). Comparing this value p value with the margin error being set in the research (0.05), obviously this p value was > 0.05 suggesting that the observed impact value was considered to be NOT statistically significant? As a result, this hypothesis was rejected.

H5: There is a positive impact at (0.05) level for capital government spending on domestic investment

The results of multiple linear regression presented by table (1) indicate the impact value for capital government spending was (-0.396683), once this value was a negative, we conclude that capital government spending negatively affects the domestic investments (inverse of the research assumption) such that a decrees of (-0.396683) by the capital government spending will lead to a decrease by (1.000) in the domestic investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0215). When comparing this value with the margin error being used in the current research (0.05), obviously this p value was < 0.05 suggesting that the observed impact value was considered to be statistically significant. As a result, this hypothesis was accepted and that the impact direction was negative by the shown value.

3. testing the impact on the foreign direct investments (DI)

Multiple linear regression was performed to test for the second model which handles the foreign direct investments as a dependent variable. The results are included in the following table

Table (3): Multiple linear regression for estimating the second model (foreign direct investments) FDI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2	-0.062063	0.020237	-3.066838	0.0919
MC	0.407225	0.377166	1.079697	0.3932
EXRATE	925.2606	314.0735	2.946000	0.0985
TAX	-0.097487	0.026159	-3.726745	0.0651
GCS	-0.025429	0.016748	-1.518343	0.2682
C	-17074.21	29027.88	-0.588201	0.6160
R-squared	0.997979	Mean dependent var		10451.63
Adjusted R-squared	0.992925	S.D. dependent var		9238.534
F-statistic	197.4806	Durbin-Watson stat		2.111643
Prob(F-statistic)	0.005046			

(Dependent variable: foreign direct investments FDI)

Table (3) indicates the results of estimating the second model adopted by this research which expressed by the foreign direct investments (per year) as a dependent variable and the other independent variable mentioned earlier. The data were expressed annually within the period (2010 – 2018). According to the results the f value (197.4806) was considered to be statistically significant as the associated probability value was (0.005046) < 0.05 concluding the model is accepted statistically. Further the adjusted coefficient of determination (explanation) was (0.992925), this value expresses a high percentage of explanation of the variation in the domestic investments by the predictors being used by the model. Concerning the serial auto correlation, the DW test was used, the test result was (2.111643) reflecting no auto correlation issues could be reported as the test value was around the desired reference value (2) and within the range (1.50 – 2.05).

$$FDI = -0.0620630727792 \times M2 + 0.407224877599 \times MC - 0.0254289093279 \times GCS + 925.260562417 \times EXRATE - 0.0974868775349 \times TAX - 17074.2143085$$

Further the researcher forecasted the values of the foreign direct investments during the period (2010 - 2017), to test for stability in the FDI, it was obvious that the bias proportion value was (0.000000) and that the variance proportion was (0.000506) which is very small amount and that the covariance proportion value was (0.999494) which represents a good indication (almost to 1), the results are presented in the following chart.
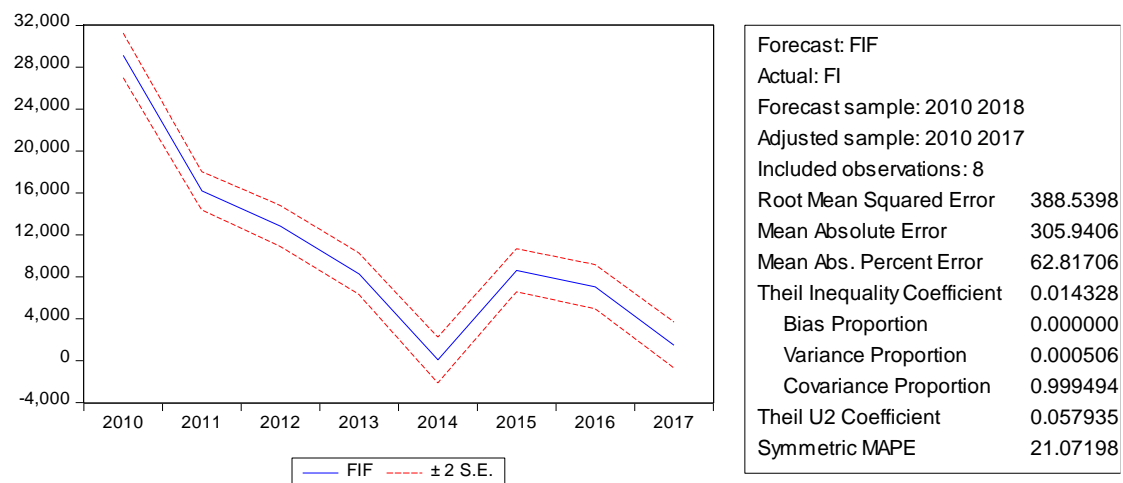
Forecast: FIF	
Actual: FI	
Forecast sample: 2010 2018	
Adjusted sample: 2010 2017	
Included observations: 8	
Root Mean Squared Error	388.5398
Mean Absolute Error	305.9406
Mean Abs. Percent Error	62.81706
Theil Inequality Coefficient	0.014328
Bias Proportion	0.000000
Variance Proportion	0.000506
Covariance Proportion	0.999494
Theil U2 Coefficient	0.057935
Symmetric MAPE	21.07198

Chart (2): Forecasting the foreign direct investments (FDI)

4. Testing the second model (FDI) hypothesis

H6: There is a negative impact at (0.05) level for Money supply on foreign direct investment

The results of multiple linear regression presented by table (3) indicate the impact value for money supply was (-0.062063), once this value was negative, we conclude that money supply negatively affects the foreign direct investments (the same as we assume in this research) such that a decrease of (-0.062063) by the money supply will lead to a decrease by (1.000) in the foreign direct investments.

The impact value was tested for statistical significance. T-test was used. As could be figured out from the results provided by the table the p value was (0.0919). Comparing this probability value with the margin error being used in the current research (0.05) obviously this p value was > 0.05 suggesting that the observed impact value was considered to be statistically not significant. As a result, this hypothesis was rejected.

H7: There is a negative impact at (0.05) level for Monetary cash reserve on foreign direct investment

The results of multiple linear regression presented by table (3) indicate the impact value for monetary cash reserve was (0.407225), once this value was a positive, we conclude that money supply positively affects the foreign direct investments (inverse to what we postulate) such that an increase of (0.407225) by the monetary cash reserve will lead to an increase by (1.000) in the foreign direct investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.3932). Putting this value in comparison with the margin error being set in the current research (0.05), obviously this p value was > 0.05 suggesting that the observed impact value was considered to be statistically not significant. Accordingly, this hypothesis was rejected.

H8: There is a negative impact at (0.05) level for Exchange rate on foreign direct investment

The results of multiple linear regression presented by table (3) indicate the impact value for Exchange rate was (-925.2606), once this value was a negative, we conclude that Exchange rate negatively affects the foreign direct investments (aligned with the assumption) such that a decrease of (925.2606) by the Exchange rate will lead to a decrease by (1.000) in the foreign direct investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0985). Comparing this value with the margin error being used in the current research (0.05), obviously this p value was > 0.05 suggesting that the observed impact value was considered to be statistically not significant? consequently this hypothesis was rejected.

H9: There is a negative impact at (0.05) level for taxation on foreign direct investment

The results of multiple linear regression presented by table (3) illustrate the impact value for taxation was (-0.097487), once this value was a negative, we conclude that taxation negatively affects the foreign direct investments (on the contrary of our assumption) such that a decrease of (-0.097487) by the taxation will lead to a decrease by (1.000) in the foreign direct investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.0651). Comparing this value p value with the margin error being set in the research (0.05), obviously this p value was > 0.05 suggesting that the observed impact value was considered to be NOT statistically significant? As a result, this hypothesis was rejected.

H10: There is a positive impact at (0.05) level for capital government spending on foreign direct investment

The results of multiple linear regression presented by table (3) indicate the impact value for *capital government spending* was (-0.025429), once this value was a negative, we conclude that *capital government spending* negatively affects the foreign direct investments (inverse of the research assumption) such that a

decrees of (-0.025429) by the *capital government spending* will lead to a decrease by (1.000) in the foreign direct investments.

The impact value was tested for statistical significance. T-test was used. Relying on the probability provided by the table the p value was (0.2682). this value was > 0.05 the margin error being used in the current research, suggesting that the observed impact value was considered to be not statistically significant. As a result, this hypothesis was rejected.

5. Conclusions

The aim of this research is to study the impact of Fiscal and monetary policy in Saudi Arabia on attracting foreign investment for the period 2010–2018. The researcher used the multiple linear regression to test the research hypothesis. Linear regression is used to investigate the impact values by each predictor variable.

Multiple linear regression was performed to test for the first model which handles the domestic investments as a dependent variable. The results show that Money supply, Monetary cash reserve, capital government spending and taxation positively affects the domestic investments, while Exchange rate negatively affects the domestic investments, this means that the effectiveness of most of the tools not influencing domestic investment.

Multiple linear regression was performed to test for the second model which handles the foreign direct investments as a dependent variable. The results show that all independent variables positively affects the foreign direct investment. This is due to the large amount of tax exemptions imposed on investors in order to encourage foreign investment, in addition to the state's adoption of infrastructure, services and education projects, which weakens the impact of (government spending) on foreign direct investment.

The study recommends the necessity to follow an encouraging policy for local banks to increase their role in investing locally.

References:

[1] ALAWNEH. Ateyah M. (2015). "The Impact of the Fiscal and Quantitative Monetary Policies on the Domestic and Foreign Direct Investment in Jordan. An Empirical Study", International Journal of Academic Research in Accounting, Finance and Management Sciences, University of Jordan,5(4): https://doi.org/10.6007/ijarafms/v5-i4/1812.

[2] Baum A. & Koester G.B. (2011). "The impact of fiscal policy on economic activity over the business cycle–evidence from a threshold VA analysis", Deutsche Bundesbank, Wilhelm-Epstein-StraBe 14, 60431 Frankfurt am Main, Postfach 10 06 02, 60006 Frankfurt am Main.

[3] Ejuvbekpokpo Stephen Akpo & Sallahuddin Hassan PhD, (2015). "INSTITUTIONAL QUALITY MATTER: AN EMPIRICAL INVESTIGATION OF FOREIGN DIRECT INVESTMENT IN NIGERIA", e-Journal of the Social Science Researches, 3.

[4] El. Hamoudi, Mustafa Khalifa Thawadi (2016), "The Impact of Fiscal Policy on Investment in Libya (2000-2015)" Open Access Library Journal, 3(12): 1-14, https://doi.org/10.4236/oalib.1103184.

[5] Joshua A. Bello, (2005). "FISCAL POLICY AND THE GROWTH OF FOREIGN DIRECT INVESTMENT IN SUB-SAHARAN AFRICA (SELECTED COUNTRIES: GHANA, KENYA, NIGERIA, AND SOUTH AFRICA)", Auburn University.

[6] Allawi, Mohamed Lahcen, Brousha, Karim, (2015). "The Impact of Fiscal Policy on Foreign Direct Investment Inflows to Algeria", alwadi university Journal, 5.

[7] Ndikumana, L. (2014). "Implications of Monetary Policy for Credit and Investment in sub-Saharan African Countries", Department of Economics and Political Economy Research Institute, University of Massachusetts at Amherst.

[8] Niti Bhasin, (2014). "The Impact of Fiscal Policy on Foreign Direct Investment Inflows: A Study of India and Select Asian", Economies journal press India, Department of Commerce, Delhi School of Economics, University of Delhi

[9] Olweny, T. & Chiluwe, M. (2012). "The Effect of Monetary Policy on Private Sector Investment in Kenya", Journal of Applied Finance & Banking, 2(2): 239-287.

[10] PAUL NDUBUISI, KALU (2016), "Government Policy and Foreign Direct Investment Inflows into Nigeria", International Journal of Educational Science and Research (IJESR), 6

[11] Nuriya, Qadri, & Fatima Zahra (2018) "The impact of fiscal and monetary policy on foreign direct investment in Algeria during the period 1990 – 2016", Global Journal of Economics and Business, 5(2): 222 – 241

[12] Rădulescu, M. & Druica, E. (2014). "The impact of fiscal policy on foreign direct investments. Empiric evidence from Romania", Economic Research, 27(1): 86–106, http://dx.doi.org/10.1080/ 1331677X.2014.947133.

[13] Solomon, A.G. (2012). "Impact of Euro-Area accession on fiscal and budgetary policy in Romania", Procedia-Social and Behavioral Sciences Journal, 62(24): 733-738, https://doi.org/10.1016/j.sbspro.2012.09.124.