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IMPACT OF FISCAL DEFICIT IN SAUDI ARABIA

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ABSTRACT:

Fiscal deficit is a very important aspect to be studied in finance and economics. The impact of fiscal deficit on economic growth remains one of the highly debated issues across all economies worldwide. This study is interested in determining the impact of fiscal deficit on government expend, Gross Domestic Product (GDP), the inflation, and unemployment. The methods applied in the investigation, mainly include the Granger Causality test, simultaneous equations model, Vector Auto Regression (VAR), Ordinary Least Squares, and Error Correction Models (ECM). Notwithstanding, empirical literatures available indicated that the method of financing as well as the government spending components have different economic effects. Findings from this study showed that fiscal deficit has a strong positive impact of the government expand nation as a percentage of the GDP. Similar to other cases of emerging market economies, the fiscal policies are dominant in the simulation of the private sector development. The research also revealed that there exist a strong negative impact between the fiscal deficit and inflation.

INTRODUCTION:

The impact of fiscal deficit on economic growth remains one of the highly debated issues across all economies worldwide. The desire to achieve sustained growth and maintain macroeconomic stability is common among not only developed but also underdeveloped and developing economies [1]. The Economic growth and stability enjoyed by developing countries in the past few decades have led to increased analysis of fiscal deficit issues. The high levels of fiscal deficit, adoption of fiscal deficit coupled with the Budget Management Act have posed a serious danger to Saudi's economic stability. The gross fiscal deficit in Saudi Arabia is defined as the excess of the sum

total of revenue expenditure, capital outlay and net lending over revenue and non-debt receipts [2]. To finance its revenue and expenditure mismatches the Saudi government has to incur deficits. However, these problems arise in cases where the deficit level shoots too high to a chronic level. The negative effects of high deficits arise from the manner in which they are financed and used. Akgay [3] stated the most common ways in which the government finance deficits include; domestic borrowing, foreign borrowing and printing more notes. Needless to say, excessive use of any of the aforementioned ways has adverse consequences on the country's economy. Prior to 2014, the kingdom of Saudi Arabia witnessed a sustainable period of fiscal and external surpluses which played a huge role in the strengthening of microeconomic stability and rebuilding of policy buffers. Over the last few decades, fiscal spending has increased as a result of high oil prices and revenues [4].

The oil export in Saudi Arabia constitutes at least 90% of the country's budget. The fiscal policy used is a function of the oil market development. In the past years, the uses of counter cynical fiscal stances have been used by the country to decrease the volatility of the domestic growth against the oil revenue prices. With the economic structure, there is a need to continue encouraging the private sector to undertake a greater responsibility in the diversification efforts used in the country. Since the improvement of the oil market from 2013, the fiscal spending has increased and there had been enlarged surpluses in the fiscal elements [5]. The cumulative surpluses in the budget have been used to pay the government debts that were 10% of the GDP in 2010 from 100% in 1999 [6].

Despite these steps, the fiscal deficit of Saudi Arabia remains huge, with an average of 16% between 2015 and 2016. Further, the government's net financial asset position dropped by more than 30% of the GDP while the government's borrowing from domestic and external sources increased drastically [7]. Saudi Arabia's economy has consequently started to feel the impact of fiscal adjustment. Whereas non-oil growth has slowed substantially, CPI inflation witnessed temporal increment in early 2016 as a result of high energy and water prices. Bank liquidity and funding also faced pressures as a result of the government's reduced spending and increased borrowing in order to finance the fiscal deficit [8].

Recently Saudi Arabia is facing many financial issues because of the fiscal deficit. Country's expenditure exceeds the revenue of the country and this is the main reason behind the fiscal deficit. In Saudi Arabia, the government profit from the oil sector. However, in the recent times, the oil price is decreasing worldwide and this is the main reason behind the fiscal deficit in Saudi Arabia. The tax rate in the Saudi Arabia is increasing while the government's savings are decreasing. Therefore the people of Saudi Arabia are facing many financial challenges within the country. Their income is decreasing and tax is increasing and therefore it affects the country's growth as well [9]. Hence, this research is conducted to identify the issues faced by the people of Saudi Arabia and to also identify the impact of the fiscal deficit in Saudi Arabia.

METHODOLOGY

Research Design

The study will use the panel data in the analysis. The panel data will be obtained from central bank of Saudi Arabia. The study will determine a relationship between Impact of fiscal deficit on government spending, the impact of fiscal deficit of the GDP, the Impact of fiscal deficit on unemployment, and the Impact of fiscal deficit of inflation. This will help to determine if there exist a significant relation between the dependent variables and independent variables.

Location of Study

The study will be conducted in Saudi Arabia financial sector and the economy. The study population for the research will be drawn from the government central bank. The study will consist of the central bank of Saudi Arabia, the economic reports, and the level of employment reports. The study will include the fiscal deficit report in Saudi Arabia.

Sample Size and Sampling Procedure

The study will analyze Saudi Arabia's data from 1991-2016. This data will entail the government expenditure, inflation rate, unemployment rate, GDP, and the fiscal deficit rate of the country within the stipulated years.

Data Collection Procedure

The study will use secondary data. This secondary data will be obtained from Saudi Arabia central bank, the economic reports of Saudi Arabia and the World Bank. The secondary source will also comprise of the fiscal deficit, the unemployment level, the inflation level, the gross domestic level and the government expand nation. The data will later be analyzed to determine the impact of fiscal deficit on government spending, the impact of fiscal deficit of the GDP, the Impact of fiscal deficit on unemployment, and the Impact of fiscal deficit of inflation.

Variables

The variables include fiscal deficit, the gross domestic products, the inflation, and government expand nation. Fiscal deficit occurs when the expenditure of the government exceeds the revenue it generates. This is at time covered through borrowings. GDP refers to the total value of all what is produced in a given country. On the other hand, inflation refers to the general fall or increases of prices of commodities in relation to the value of money; while Government expend nation refers to the government expenditure on revenue.

Data Analysis

The analysis used the simple regression line to evaluate the impact of fiscal deficit on government expand nation, the inflation, the unemployment, and the gross domestic product (GDP). In assessing the significant of the impact of fiscal deficit on government expand nation, the inflation, the unemployment, and the gross domestic product, the simple regression analysis was used.

RESULTS and DISCUSSION

Impact of fiscal deficit on government expand nation

Figure 1 depicted the impact of fiscal deficit on government expand nation obtained from the simple regression line. From the analysis of graph of simple regression, it can be observed that the fiscal deficit have a positive impact on the government expand nation. The graph indicates that a change of government expand nation by every single unit, lead to an increase of the fiscal deficit by 7.92 units positive. From the model summary in Table 1, it can be observed that the value of R- squared is equal to 0.427. This means that the association between the impacts of fiscal deficit on the government expands nation account for 42.7% of the variability on the fiscal deficit caused by the government expand nation.

Table 1: Model summary

Model	R	R square	Adjusted R square	Std. Error of estimation
1	0.653	0.427	0.403	34.676

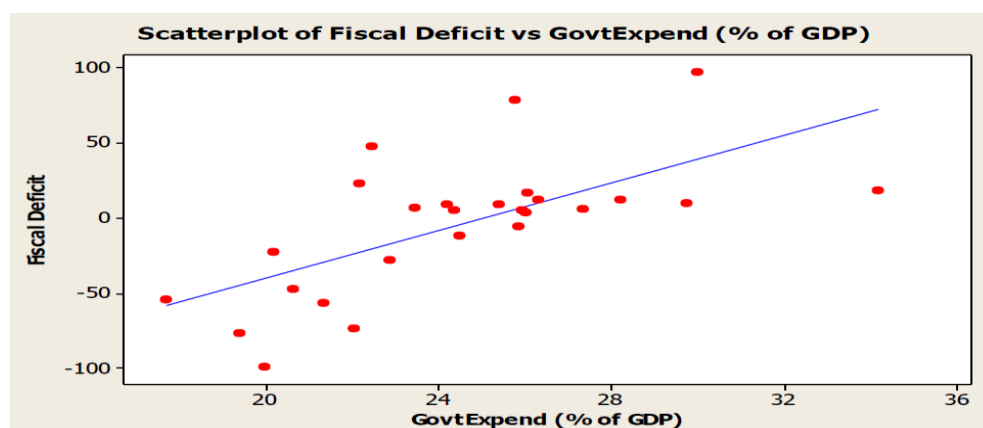


Figure 1. Fiscal deficit against the government expand nation

Table 2 presented the ANOVA results which the dependent variable was the fiscal deficit while the independent variable was the government expand nation. From the table, it is shown that the value of the $F(1, 24) = 17.876$, $p\text{-value} = 0.000$, which is less than 0.05 significant level. This means that there is significant evidence to conclude that there is significant impact between the fiscal deficit and the government expand nation. This implies that the impact of fiscal deficit greatly influences the government expand nation.

Table 2: ANOVA results

Model	Sum of Squares	df	Mean Square	F	Sig.
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Regression	21494.475	1	21494.475	17.876	0.000
Residual	28857.987	24	1202.416		
Total	50352.462	25			

As shown in Table 3 (coefficient analysis), the coefficient of government expand was 7.92, with a standard deviation of 1.873. From Table 3, it is also shown that the T- value = 4.228, p- value= 0.000 which is significantly less than 0.05 level of significant. In addition, the correlation coefficient between the fiscal deficit and the government expand nation was equal to 0.653. This proves that the fiscal deficit has a positive impact to the government expand nation.

Table 3: Coefficient analysis

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	Correlations
	B	Std. error	Beta			
Constant	198.240	46.334	0.653	4.279	0.000	0.653
GovtExpend (% of GDP)	7.920	1.873		4.228	0.000	

Impact of fiscal deficit on inflation

From the analysis of graph of simple regression shown in Figure 2, it can be observed that the fiscal deficit have a negative impact on the inflation. The graph indicates that a change of inflation by every single unit lead to a decrease of the fiscal deficit by 3.30 units negative.

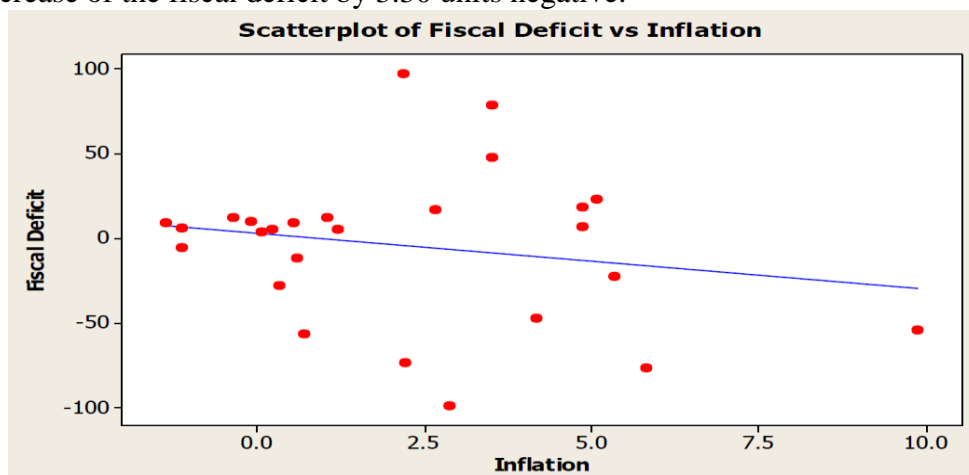


Figure 2: Fiscal deficit against the inflation

With reference to Table 4 of model summary, the value of R- squared is equal to 0.0397. This means that the association between the impacts of fiscal deficit on the inflation for 3.9% of the variability on the fiscal deficit caused by the inflation.

Table 4: Model summary

Model	R	R square	Adjusted R square	Std. Error of estimation
1	0.199	0.039	-0.001	44.891

The ANOVA results are tabulated in Table 5. From table 5, the dependent variable was the fiscal deficit while the independent variable was the inflation. It is noticed that the value of the $F(1, 24) = 0.986$, p -value = 0.331 which is greater than 0.05 significant level. This means that there is no significant evidence to conclude that there is significant impact between the fiscal deficit and the inflation. This implies that the impact of fiscal deficit does not have significant impact on inflation.

Table 5: ANOVA results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1986.677	1	1986.677	0.986	0.331
Residual	48365.784	24	2015.241		
Total	50352.462	25			

From in coefficient analysis in Table 6, it can be observed that the coefficient of inflation was -3.318, with a standard deviation of 3.342. Whereas the T -value = -0.993, p -value = 0.331 which is significantly less than 0.05 level of significant. The correlation coefficient between the fiscal deficit and the inflation was equal to -0.199. These mean that the fiscal deficit has no impact to the inflation.

Table 6: Coefficient analysis

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	Correlations
	B	Std. error	Beta			
Constant	2.903	11.512	-0.199	0.252	0.803	-0.199
Inflation	-3.318	3.342		-0.993	0.331	

Impact of fiscal deficit on unemployment rate

The scatterplot of fiscal deficit against unemployment is illustrated in Figure 3. The analysis of graph of simple regression, revealed that the fiscal deficit have a positive impact on the unemployment rate. Moreover, the graph also indicates that a change of unemployment rate by every single unit lead to an increase of the fiscal deficit by 0.53 units positive.

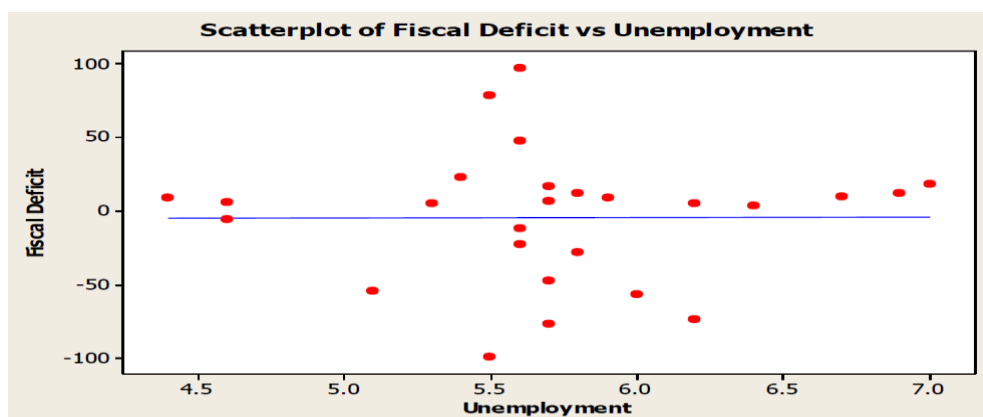


Figure 3: Fiscal deficit against unemployment

Based on the model summary in Table 7, it can be observed that the value of R- squared is equal to 0.007. This means that the association between the impacts of fiscal deficit on the unemployment rate for 0.7% of the variability on the fiscal deficit caused by the unemployment rate.

Table 7: Model summary

Model	R	R square	Adjusted R square	Std. Error of estimation
1	0.07	0.000	-0.42	45.803

With fiscal deficit as the dependent variable while the independent variable was the unemployment rate, ANOVA analysis is done and the results are presented in Table 8. From Table 8, it is found that the value of the $F(1, 24) = 0.001$, $p\text{-value} = 0.971$ which is greater than 0.05 significant level. This means that there is no significant evidence to conclude that there is significant impact between the fiscal deficit and the unemployment rate. This implies that the impact of fiscal deficit does not influence the unemployment rate.

Table 8: ANOVA results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.820	1	2.820	0.001	0.971
Residual	50349.642	24	2097.902		
Total	50352.462	25			

From Table 9 (correlation analysis), it can be observed that the coefficient of government expand was 0.528, with a standard deviation of 14.408. Furthermore, the $T\text{-value} = 0.037$, $p\text{-value} = 0.971$ which is significantly greater than 0.05 level of significant. As for the correlation coefficient, it was 0.07. These mean that the fiscal deficit has no impact to the unemployment rate.

Table 9: Coefficient analysis

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	Correlations
	B	Std. error	Beta			
Constant	-7.478	82.778	0.007	-0.090	0.929	0.007
Unemployment	0.528	14.408		0.037	0.971	

Impact of fiscal deficit on GDP per capital

As depicted in Figure 4, simple regression line is used to determine the impact of fiscal deficit on gross domestic product per capital (GDP per capital). From the analysis of graph of simple regression, it can be observed that the fiscal deficit have a negative impact on the GDP per capital. The graph indicates that a change of gross domestic product per capital by every single unit lead to a decrease of the fiscal deficit by 0.00104 units negative.

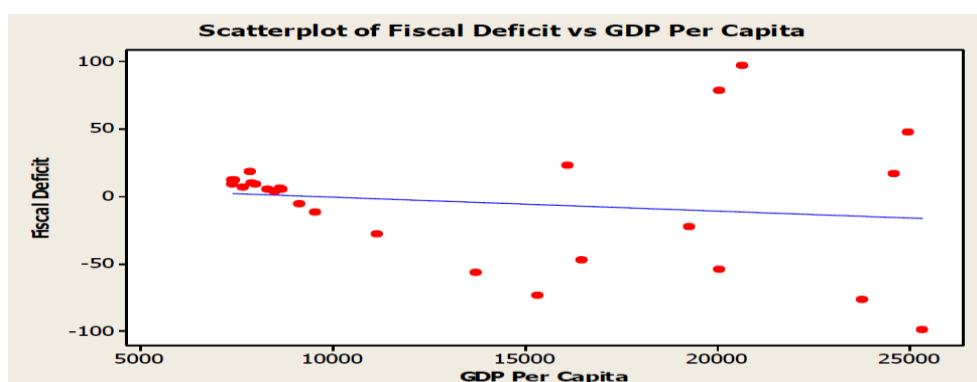


Figure 4: Fiscal deficit against the gross domestic product per capital

From the model summary in Table 10, it can be observed that the value of R-squared is equal to 0.023. This means that the association between the impacts of fiscal deficit on the gross domestic product per capital (GDP per capital) for 2.3% of the variability on the fiscal deficit caused by the gross domestic product per capital.

Table 10: Model summary

Model	R	R square	Adjusted R square	Std. Error of estimation
1	0.151	0.023	-0.018	45.277

The ANOVA results (refer Table 11) had the value of the $F(1, 24) = 0.562$, $p\text{-value} = 0.461$ which is greater than 0.05 significant level. This means that there is no significant evidence to conclude that there is significant impact between the fiscal deficit and the GDP per capital. This denotes that the

impact of fiscal deficit does not influence the gross domestic product per capital.

Table 11: ANOVA results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1152.256	1	1152.256	0.562	0.461
Residual	49200.206	24	2050.009		
Total	50352.462	25			

From the coefficient analysis as tabularized in Table12, it can be observed that the coefficient of government expand was 0.528, with a standard deviation of -0.001. In addition, it can also be observed that it has a T- value = -0.75, p-value= 0.461 which is significantly greater than 0.05 level of significant. Besides, the correlation coefficient between the fiscal deficit and the GDP per capital was equal to -0.151. These reflected that the fiscal deficit has no impact to the gross domestic product per capital (GDP per capital).

Table 12: Coefficient analysis

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	Correlations
	B	Std. error	Beta			
Constant	9.853	21.057	-0.151	0.468	0.644	-0.151
GDP per capital	-0.001	0.001		-0.750	0.461	

Overall Discussion

The fiscal deficit has a strong positive impact of the government expansion as a percentage of the GDP. Similar to other cases of emerging market economies, the fiscal policies are dominant in the simulation of the private sector development. However, between 2014 and 2015, the oil prices collapse took away the main resource from Saudi Arabia. Oil makes about 77% to 88% of the total revenue collected in the state [10]. Over the last two years, the government in Saudi Arabia declared a large budget deficit and this was the first time the nation had a deficit since 2007 [11]. This forced the Saudi Arabia government to borrow from foreign reserves and issue bonds. This was in agreement that the fiscal deficit had a strong impact on the government expenditure. This also implied that there is a great impact of fiscal deficit of the government expansion as the percentage of the GDP [12].

The research also found that there exists a strong negative impact between the fiscal deficit and inflation. According to Nazer [13], inflation in Saudi Arabia is mainly caused by food and housing prices. The cost of food especially vegetables and fresh fruits and rent have increased highly since 2005. The rent prices drive both the pressure in demography and lack of supply for the development of real estate. The food prices have increased due to the

international droughts and the rise in the local demand in the item-exporting nations. Another pressure on the rent prices is that private homes have increased to unrealistic values that make it hard for the people to afford in the building of new homes because of low income. Furthermore, there is no impact of fiscal deficit on the unemployment rate. This is supported by study by El Mallakh [14] which asserted that the fiscal deficits dropped to 8.9% in 2017 from 13% in 2013. With a smaller deficit in 2014, the government welcomed a boost due to low revenues from oil after the crude oil prices increased. This created the budget deficit that was 15% of the GDP in 2015. To counter this, the government created policies to cut spending and implemented austerity approaches that include reducing on generous subsidies. The policies reduced the deficit and created the worse slowdown in the economy since the world's financial crisis. Saudi Arabia's fiscal deficit also does not have any impact of the gross domestic impact. The fiscal deficit would be reduced by half to -8.0 of the GDP in the last year on higher non-oil, or oil revenues and the fiscal restraint. The fiscal deficit contained to be financed by a debt combination issuance and drawdowns of reserve and public debt that peaked in 2018 at 24% of the GDP [12]. Due to the budget deficit, the private investment and expenditure is redirected to the training of Saudis, localizing industries, and increasing the competitiveness of the economy. The fiscal reforms have been taking place through rationalization of expenditure, enhancement of non-oil revenue and state entities privatization. These measures are implemented with an aim of the balanced deficit.

CONCLUSION

In conclusion, among these four factors studied in relation to Saudi fiscal deficit, two factors were found to have no impacts. These factors are unemployment rate and gross domestic product. However the fiscal deficit has strong positive influence on government expand nation. As for inflation, the fiscal deficit impacts it very negatively. These findings are supported by the statistical data (probability value, correlation coefficient and T-value).

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REFERENCES

- Adam, C. S., and Bevan, D. L. 2005. Fiscal deficits and growth in developing countries. *Journal of Public Economics*, 89, 4, 571-597.
- Schclarek, A. 2004. Debt and economic growth in developing and industrial countries. Lund University Department of Economics Working Paper, 2005, 34.
- Akgay, O. C., Alper, C. E., and Ozmucur, S. 2018. Budget Deficit, Inflation and Debt Sustainability: Evidence from Turkey, 1970-2000. In *Inflation and disinflation in Turkey*. 83-102. Routledge.
- Sivramkrishna, S. 2016. Can a country really go broke? Deconstructing Saudi Arabia's macroeconomic crisis. *Real-world economics review*, 75.
- Groissböck, M., and Pickl, M. J. 2018. Fuel-price reform to achieve climate and energy policy goals in Saudi Arabia: A multiple-scenario

analysis. *Utilities Policy*, 50, 1-12.

Joharji, G., and Willoughby, J. 2014. The Saudi Arabian budgeting system: an institutional assessment. *Public Administration and Development*, 34, 1, 63-80.

Taylor, L., Proano, C. R., de Carvalho, L., and Barbosa, N. 2012. Fiscal deficits, economic growth and government debt in the USA. *Cambridge Journal of Economics*, 36, 1, 189-204.

Bleaney, M., Gemmell, N., and Kneller, R. 2001. Testing the endogenous growth model: public expenditure, taxation, and growth over the long run. *Canadian Journal of Economics/Revue canadienne d'économique*, 34, 1, 36-57.

Muye, I. M., Kaita, R. A., and Hassan, A. F. S. 2017. Debt and Economic Growth in an Oil Rich Economy: Evidence from Saudi Arabia. *International Journal of Economics and Financial Issues*, 7, 4, 70-75.

Bowler, T. 2015. Falling oil prices: Who are the winners and losers. *BBC news*, 19.

Arezki, R., and Blanchard, O. 2014. Seven questions about the recent oil price slump. *IMFdirect-The IMF Blog*, 22.

Onoh, J. O., Nwachukwu, T., and Mbanasor, C. A. 2018. Economic growth in OPEC member states: Oil export earnings versus non-oil export earnings. *Journal of Developing Country Studies*, ISSN, 2225-0565.

Nazer, Y. 2016. Causes of inflation in Saudi Arabia. *The Business and Management Review*, 7, 3, 147.

El Mallakh, R. 2015. Saudi Arabia: Rush to Development (RLE Economy of Middle East): Profile of an energy economy and investment. *Routledge*.

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