

# The Balance of Payment of the KSA and Its Main Determinants Financial Economic Time Series Analysis from 1981 to 2007

Ghada Gomaa A. Mohamed<sup>1</sup>, & Nisreen Ismail M. Al-Banawi<sup>2</sup>

<sup>1</sup>PostDoc. Telfer School of Management, University of Ottawa, Canada. Senior Researcher: ECO-ENA: Economics & ECO-Engineering Associate, Inc., Canada

<sup>2</sup>Assistant Professor, Economics Department, King Abdulaziz University, KSA

Correspondence: Ghada Gomaa A. Mohamed, PostDoc. Telfer School of Management, University of Ottawa, Canada. Senior Researcher: ECO-ENA: Economics & ECO-Engineering Associate, Inc., Canada.

Received: September 22, 2015

Accepted: October 3, 2015

Available online: October 8, 2015

doi:10.11114/afa.v2i1.1133

URL: <http://dx.doi.org/10.11114/afa.v2i1.1133>

## Abstract

This paper addresses the impact of different factors that are theoretically believed to have significant impact on the status of the balance of payment. The paper applies those theoretical concepts on the status of the balance of payment of Saudi Arabia from 1981 to 2007. The paper gives interesting implications in that regard for decision makers so they can address different implications on the status of the balance of payment of the country by incorporating endogenously different macro-variables addressed by the current paper while they take decisions regarding the improvement of the status of the balance of payment economically.

**Keywords:** Saudi Arabia, Balance of payment, Foreign Exchange Rate, Time Series Analysis

**JEL:** E, F, G, Z

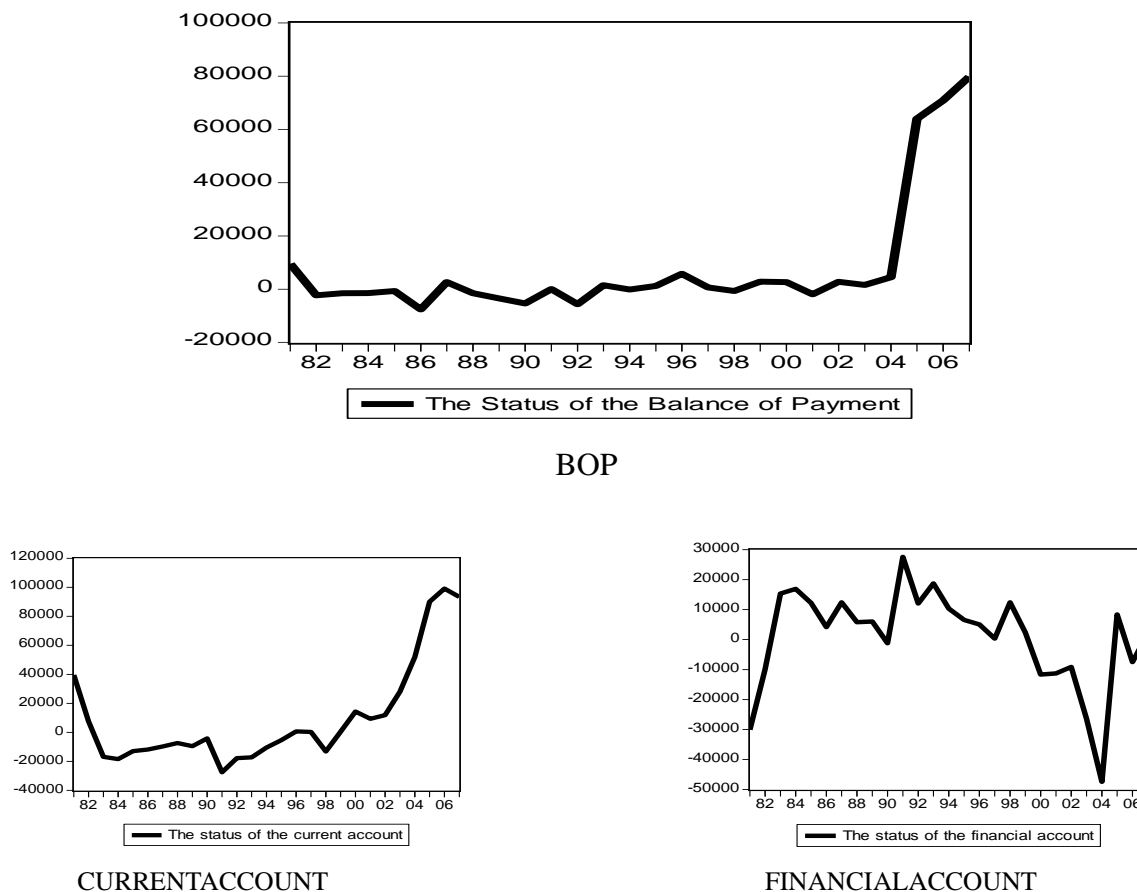
## 1. Introduction

Since the establishment of the GCC in May 25, 1981; the economy of Saudi Arabia has been greatly affected by various integrated policies whether on the regional level or on the international level since it has adopted external policies affected its balance of payment. A big economic movement has also happened as a result of the adoption of the peg to the dollar foreign exchange rate regime in 1986 which linked the business cycle of the entire gulf region with the business cycle of USA. Despite obvious fluctuations in economic growth rate of Saudi Arabia, the period after the adoption of the new peg to the dollar foreign exchange rate regime experienced in average a positive economic growth rate. The country also adopted different acts to encourage foreign capital inflows. Most importantly the revised foreign investment act imposed in 2000. The country also adopted many other foreign policies and development strategies to diversify the economy away from the crude oil and natural gas resources affected with no doubt the status of the balance of payment. The paper does not aim to review those foreign policies and strategies or even to summarize previous researchers interested in this topic. The paper however tries to test empirically main macroeconomic determinants that have been believed to affect the status of the balance of payment theoretically; i.e., the national income, the inflation rate, the interest rate, the foreign exchange rate, and the government's specific foreign policies. All-time series data have been compiled from the IMF: International Financial Yearbook of 2010/2011. Yet, the paper started the analysis from 1981 to capture the entire period since the establishment of the GCC. Also the period after 2007 have been eliminated from the analysis in order to avoid the fluctuations happened because of the global financial crisis started in USA in the last quarter of 2007. The paper also controlled for all variables that believed to affect the result and it chose the regression method that can absorb potential heteroscedasticity and autocorrelation from one hand and avoid multicollinearity among integrated macroeconomic variables from the other hand. Best fit regression models show significant effects of the national income, the inflation rate, the interest rate on the balance of payment from one side and insignificant effect of the foreign exchange rate on the status of the balance of payment from the other side. The paper also presented plausible interpretation of empirical results.

The paper is structured as follows; section I illustrates the time path of the balance of payment and its economic components from 1981 to 2007. Section II explains the theoretical implications of the main macroeconomic determinants of the balance of payment. Section III sets different models that show the total effect and the partial effect

of the main determinants of the balance of payment. Section IV presents the empirical results of five models tested. Section V presents the plausible interpretations of the empirical results. The conclusion then follows section V.

Section I: The behavior of the balance of payment & its components over time:



	<b>BOP</b>	<b>CURRENTACCOUNT</b>	<b>FINANCIALACCOUNT</b>
<b>Mean</b>	8070.844	9796.624	897.4163
<b>Median</b>	647.1320	-4146.670	5061.920
<b>Maximum</b>	79818.80	99066.00	27558.40
<b>Minimum</b>	-7613.810	-27509.30	-47428.20
<b>Std. Dev.</b>	23255.08	35336.17	16301.69
<b>Skewness</b>	2.407616	1.524155	-1.177461

Figure1. The status of the balance of payment, the status of the current account, and the status of the financial account consecutively. (The status of the capital account is zero for all years).

Figure 1 illustrates the behavior of the time path of the status of the balance of payment (BOP) of Saudi Arabia and its main economic components; the current account (CURRENTACCOUNT) and the financial account (FINANCIALACCOUNT) over the period of the analysis. The capital account (CAPITALACCOUNT) and according to its time series data as presented in tables of the appendix shows balanced status in all years. This is why figure 1 illustrates only the behavior of the status of both the current account and the financial account over the period of analysis. It is obvious from figure 1 that the status of the current account dominated the status of the financial account after 2004 that has been affected the status of the balance of payment positively. The statistics attached to figure 1 shows a positive status of the balance of payment and its main economic components in average over the period of the analysis. Yet, the Skewness of the financial account only shows negative position. Section II explains the macroeconomic determinates of the balance of payment according to theories of international finance.

**2. Section II: The main macro-economic variables that affect the status of the payment**

Theoretically speaking there are five main macroeconomic determinants affect the status of the balance of payment in general; i.e., the relative national income (NI), the relative inflation rate (INF), the relative interest rate (INT) as a proxy for the relative return on capital, the foreign exchange rate (EXCHANGE) and finally the government policies and

strategies (*GOV*). The real national income affects directly the current account since it improves the relative international competitiveness of the country to import more goods and services and hence it might have a net negative effect on the status of the balance of payment. Yet, it can also have an impact on the other economic components of the balance of payment because it eventually increases the financial position of the country relatively. On the other hand; a higher inflation rate with relative to foreign inflation rates has with no doubt a negative net impact on the status of the balance of payment if other variables are controlled for. Also; the higher relative return on capital encourages more foreign capital inflows and hence a net positive impact on the status of the balance of payment. Furthermore; a higher relative foreign exchange rate enhances the position of the balance of payment and its economic components if all other variables are controlled for. Finally the government foreign policies and development strategies can be whether artificially or endogenously affect the position of the balance of payment. The integration also among all those determinants or between two or more factors may or may not have a net impact on the status of the balance of payment. The integration of those five macroeconomic factors is indeed complicated if we know that five integrated international markets do work spontaneously and dynamically on the global arena. Table 1 summarizes most important dates affected and have been affected by Saudi Arabia's foreign policies since 1981.

Table 1. Summarizes Most Important Dates Affected and Have Been Affected by the county's Foreign Policies from 1980 to 2007 (Excluding the Period of The Global Financial Crisis Started in the Last Quarter Of 2007)

Date	Policies taken	Dummy Variables
25 May, 1981	"The GCC is established and decided to adopt the peg to the US dollars exchange rate system in the end of 1981." ^	$D_1$ (Starting from 1981)
1986	"The SAR has been pegged to the US dollar." ^^	$D_2$ (Starting from 1986)
2000	"The Revised Foreign Investment Act." ^^	$D_3$ (Starting from 2000)
December 2005	"Adopting a development strategy to diversify the economy away from the crude oil and natural gas." ^^	$D_4$ (Starting from 2006)

#### Sources:

^Wikipedia:[http://en.wikipedia.org/wiki/Cooperation\\_Council\\_for\\_the\\_Arab\\_States\\_of\\_the\\_Gulf](http://en.wikipedia.org/wiki/Cooperation_Council_for_the_Arab_States_of_the_Gulf) ^^Foreign investment in Saudi Arabia: Document WT/TPR/S/256: The Kingdom of Saudi Arabia: <http://www.lawteacher.net/company-law/essays/foreign-investment-in-saudi-arabia.php>

According to table 1 four important dummy variables have been specified as a proxy to the variable of the government control and policies (*GOV*). However, the fourth dummy variable can be excluded because it can be captured in the third dummy variable. In addition the first dummy variable can be also excluded since the period of analysis starts already from 1981 which can capture the entire period since the establishment of the GCC. Accordingly, two dummy variables can only be included obviously in the analysis;  $D_2$  and  $D_3$  as a proxy for the government control & policies (*GOV*). Where, the  $D_2$  takes on the value 1 since 1986 and takes on the value zero before 1986 whereas the  $D_3$  takes on the value 1 since 2000 and takes on the value zero before 2000.

### 3. Total Effects and Partial Effects of the Main Determinants of the Balance of Payment

This section presents the empirical test of the impact of each of the previous section's macro-economic variables mainly the national income (*NI*), the inflation rate (*INF*), the interest rate (*INT*), the foreign exchange rate (*EXCHANGE*), and the two main dummy variables of the government foreign policies ( $D_2$  &  $D_3$ ) that believed to affect the status of the balance of payment (*BOP*) of Saudi Arabia as discussed in the previous section; partially by using the Generalized Method of Moments (GMM) regression method in order to control for the rest of variables including the economic growth rate of USA as a proxy of the external business cycle (*USBC*) but after testing for the total effect of the first four variables; *NI*, *INF*, *INT*, and *EXCHANGE* together on the status of the balance of payment (*BOP*) with controlling for the last 3-variables;  $D_1$ ,  $D_2$ , and *USBC* in the instrument and by using the same regression method to absorb potential heteroscedasticity and multicollinearity. The time (*TIME*) also incorporated into the instrument to control for the trend in time series data. Accordingly; the following 5 models are tested and all results are presented in section IV in tables 2, 3, 4, 5, and 6 respectively.

#### Model 1:

$$BOP = \gamma + \beta_1 (NI) + \beta_2 (INF) + \beta_3 (INT) + \beta_4 (EXCHANGE)$$

With,

$$I = \{D_1, D_2, USBC, TIME\}.$$

Where,  $\gamma$  is constant, and  $\beta_4$  is the coefficient of the *EXCHANGE*.

**Model 2:**

$$BOP = \alpha_1 + \beta_1 (NI)$$

With,

$$I = \{INF, INT, EXCHANGE, D2, D3, USBC, TIME\}.$$

Where,  $\alpha_1$  is constant,  $\beta_1$  is the coefficient of the *NI*, and *I* is the instrument.

**Model 3:**

$$BOP = \alpha_2 + \beta_2 (INF)$$

With,

$$I = \{NI, INT, EXCHANGE, D2, D3, USBC, TIME\}.$$

Where,  $\alpha_2$  is constant, and  $\beta_2$  is the coefficient of the *INF*.

**Model 4:**

$$BOP = \alpha_3 + \beta_3 (INT)$$

With,

$$I = \{NI, INF, EXCHANGE, D2, D3, USBC, TIME\}.$$

Where,  $\alpha_3$  is constant, and  $\beta_3$  is the coefficient of the *INT*.

**Model 5:**

$$BOP = \alpha_4 + \beta_4 (EXCHANGE)$$

With,

$$I = \{NI, INF, INT, D2, D3, USBC, TIME\}.$$

Where,  $\alpha_4$  is constant, and  $\beta_4$  is the coefficient of the *EXCHANGE*.

**4. The Empirical Results**

Results of models indicated in section V are presented consecutively below. *Q-statistics* is used until 12 lags to test for autocorrelation. Both the status of the current account (*CURRENTACCOUNT*) and the status of the capital account (*CAPITALACCOUNT*) have been added to the instrumental list because by using the trial-and-error technique to find best fit models, both (*CURRENTACCOUNT*) and (*CAPITALACCOUNT*) had to be controlled for; that can be claimed that the results could be interpreted mainly on the status of the financial account (*FINANCIALACCOUNT*). All results of best fit models did not show any evidence for autocorrelation.

Table 2. represents the result of Model 1 in section V

Dependent Variable: BOP					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
<i>C</i>	66409.53	57313.35	1.158710	0.2609	
<i>NI</i>	0.007286	0.053606	0.135913	0.8933	
<i>INF</i>	458.6531	341.0401	1.344866	0.1945	
<i>INT</i>	559.3638	1102.418	0.507397	0.6177	
<i>EXCHANGE</i>	-18738.24	18493.45	-1.013236	0.3237	
<b>Instrument list:</b>	<i>D2 D3 USBC CURRENTACCOUNT CAPITALACCOUNT TIME</i>				
Q-statistics for 12 lags shows no evidence for autocorrelation.					

It is obvious from table 2 that the best fit model shows that all variables did not have significant effect on the status of the balance of payment (*BOP*) of Saudi Arabia even after controlling for variables believed to have impact on the result; *D2, D3, USBC, CURRENTACCOUNT, CAPITALACCOUNT* and *TIME*. Models 2, 3, 4, and 5 however tests each of the determinants separately to control for the integration effect of the four integrated determinants; *NI, INF, INT, and EXCHANGE*.

Table 3. Represents the result of Model 2 in section V:

Dependent Variable: <i>BOP</i>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	-5922.079	989.6911	-5.983765	0.0000
<i>NI</i>	0.041468	0.006985	5.936838	0.0000
<b>Instrument list:</b> <i>INF INT EXCHANGE D2 D3 USBC CURRENTACCOUNT CAPITALACCOUNT TIME</i>				
<b><i>Q</i>-statistics for 12 lags shows no evidence for autocorrelation.</b>				

It is obvious from table 3 that the real national income (*NI*) has a positive significant effect on the status of the balance of payment (*BOP*) of Saudi Arabia. This result has been attained after controlling for the rest of the determinants in addition to other variables believed to affect the result; *INF*, *INT*, *EXCHANGE*, *D2*, *D3*, *USBC*, *CURRENTACCOUNT*, *CAPITALACCOUNT*, and *TIME*.

Table 4. Represents the result of Model 3 in section V:

Dependent Variable: <i>BOP</i>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	309.6896	204.8763	1.511594	0.1449
<i>INF</i>	356.4116	30.78531	11.57733	0.0000
<b>Instrument list:</b> <i>NI INT EXCHANGE D2 D3 USBC CURRENTACCOUNT CAPITALACCOUNT TIME</i>				
<b><i>Q</i>-statistics for 12 lags shows no evidence for autocorrelation.</b>				

It is obvious from table 4 that the best fit model shows that the inflation rate (*INF*) has a significant positive effect on the status of payment (*BOP*) of Saudi Arabia. This result has been attained after controlling for the rest of determinants in addition to other variables believed to affect the result; *NI*, *INT*, *EXCHANGE*, *D2*, *D3*, *USBC*, *CURRENTACCOUNT*, *CAPITALACCOUNT*, and *TIME*.

Table 5. Represents the result of Model 4 in section V:

Dependent Variable: <i>BOP</i>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	-2027.844	587.9422	-3.449053	0.0023
<i>INT</i>	594.2179	149.8394	3.965698	0.0007
<b>Instrument list:</b> <i>NI INF EXCHANGE D2 D3 USBC CURRENTACCOUNT CAPITALACCOUNT TIME</i>				
<b><i>Q</i>-statistics for 12 lags shows no evidence for autocorrelation.</b>				

It is obvious from table 5 that the best fit model shows a significant positive effect between the interest rate (*INT*) and the status of the balance of payment (*BOP*) of Saudi Arabia. This result has been attained after controlling for the rest of determinants in addition to other variables believed to affect the result; *NI*, *INF*, *EXCHANGE*, *D2*, *D3*, *USBC*, *CURRENTACCOUNT*, *CAPITALACCOUNT*, and *TIME*.

Table 6. Represents the result of Model 5 in section V

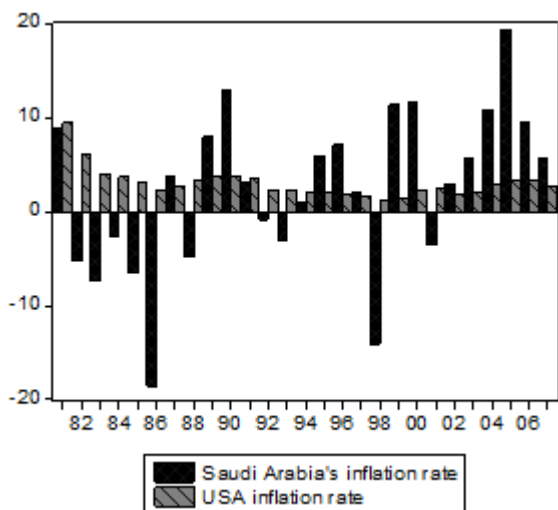
Dependent Variable: <i>BOP</i>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	16426.94	12823.05	1.281048	0.2135
<i>EXCHANGE</i>	-4861.357	3471.218	-1.400476	0.1753
<b>Instrument list:</b> <i>NI INF INT D2 D3 USBC CURRENCTACCOUNT CAPITALACCOUNT TIME</i>				
<b><i>Q</i>-statistics for 12 lags shows no evidence for autocorrelation.</b>				

It is obvious from table 6 that the best fit model shows that the foreign exchange rate (*EXCHANGE*) did not have a significant impact on the status of the balance of payment (*BOP*) of Saudi Arabia. This result has been attained after controlling for the rest of determinants in addition to other variables believed to affect the result; *NI*, *INF*, *EXCHANGE*, *D2*, *D3*, *USBC*, *CURRENTACCOUNT*, *CAPITALACCOUNT*, and *TIME*.

## 5. Interpretations of the Empirical Results

The empirical results attained from section IV show positive significant effects of the national income (*NI*), the inflation rate (*INF*) and the interest rate (*INT*) separately on the status of the balance of payment (*BOP*) of Saudi Arabia after controlling for other variables believed to affect the result. On the other hand; the foreign exchange rate (*EXCHANGE*) has a negative insignificant effect on the status of the balance of payment (*BOP*) of Saudi Arabia after controlling for variables believed to affect the result. Those results were expected because of the peg to the dollar foreign exchange

regime that has been adopted by the country especially after controlling for period of adopting it. On the other hand; because of controlling for the current account (*CURRENTACCOUNT*), the national income (*NI*) that should have theoretically a negative impact on the status of the current account (*CURRENTACCOUNT*) it is theoretically also expected for its impact to be captured to have a positive impact on the status of the financial position of the country. A higher real national income is; a higher economic power will be for a better external financial position. The significant positive impact of the inflation rate (*INF*) from the other hand on the status of the balance of payment (*BOP*) of Saudi Arabia after controlling for all other variables can be interpreted relatively to the world inflation rate. Relatively speaking; by taking the inflation rate of USA as a proxy of the world inflation rate we can find that the inflation rate of Saudi Arabia in average is less than the average of the inflation rate of USA for example over the period of analysis. Figure 2 shows the behaviour of the inflation rate of Saudi Arabia (*INF*) and behaviour the inflation rate of USA (*USINF*) from 1981 to 2007. The attached table to the figure shows also statistics of both *INF* and *USINF* over the period of analysis. Statistics show periods of deflations are higher than periods of inflation in Saudi Arabia over the period 1981 – 2007.



	<i>INF</i>	<i>USINF</i>
<b>Mean</b>	2.334130	3.005289
<b>Median</b>	3.092784	2.691121
<b>Maximum</b>	19.33174	9.400444
<b>Minimum</b>	-18.54975	1.110995
<b>Std. Dev.</b>	8.581260	1.638047
<b>Skewness</b>	-0.440926	2.437202
<b>Observations</b>	27	27

Figure 2. The behaviour of Saudi Arabia’s inflation rate and USA’s inflation rate over the period 1981 - 2007.

The interest rate (*INT*) of Saudi Arabia from another hand has a significant positive impact also on the status of payment (*BOP*) because after controlling for all other variables including the status of the current account (*CURRENTACCOUNT*), the impact is captured mainly on the status of the financial account (*FINANCIALACCOUNT*). The plausible interpretation of this result is that the domestic interest rate as a proxy to capital return was attractive enough for more foreign capital inflows. However the interest rate data were not available before 1986 have been set to be zeroes from 1981 to 1985 in order to not to affect the mean over the period of analysis.

Finally and according to the empirical result; the foreign exchange rate (*EXCHANGE*) did not have a significant effect on the status of payment (*BOP*) of Saudi Arabia after controlling for the rest of variables which could satisfy the pre expectations because of the peg to the dollar foreign exchange regime adopted by Saudi Arabia from 1986 that was captured in the dummy variable *D<sub>2</sub>*.

**6. Conclusion**

The paper tried to test empirically factors that are theoretically believed to affect the status of the balance of payment in general on the status of the balance of payment of Saudi Arabia. Period of analysis was from 1981 to 2007. The period after 2007 has been eliminated to avoid biased results that might be arisen because of the severe global financial crisis started in USA in the last quarter of 2007. The analysis also started from 1981 to capture the entire period of the establishment of the GCC. The analysis controlled for all numerical and dummy variables believed to affect the results. Best fit models have been found after controlling for the status of both the current account and the capital account. The results show significant effect of the national income, the inflation rate, and the interest rate on the status of payment of Saudi Arabia while results show insignificant effect of the foreign exchange rate on the status of the balance of payment of Saudi Arabia.

All results could be also linked directly to the status of the financial account of Saudi Arabia because the other two accounts; the current account and the capital account have been controlled for in the analysis.

## References

- Aghion, P., Bacchetta, P., & Banerjee, A. (2004). A corporate balance-sheet approach to currency crises, *Journal of Economic Theory*, 119, 6-30.
- Calvo, G., & Reinhart, C. (2002). Fear of floating, *Quarterly Journal of Economics*, 117(2), 379–408.
- Canzoneri, M., Cumby, R., & Diba, B. (2005). The need for international policy coordination: What's old, what's new, what is yet to come? *Journal of International Economics*, 66(2), 363-384.
- Cherkaoui, M., & Jalali-Naini, A. (2002). Trade liberalization, real exchange rate, and export diversification in selected North African Economies, *Economic Development, Technological Change: Economic Diversification in the Arab World*: Arab Planning Institute (API).
- Darrat, A., & Al Shamsi, F. (2005). On the path of integration in the Gulf region, *Applied Economics*, 37, 1055-1062.
- Dellas, H. (2006). Monetary policy in open economies, *European Economic Review*, 50(6), 1471–1486.
- Eichengreen, B., & Hausmann, R. (1999). Exchange rates and financial fragility, *NBER Working Paper*, 7418.
- Mohamed, G., & Manuch, I. (2009). The GCC Single Currency and Competing Views on Regime Choice Determinants, Canadian Economic Association's conferences proceedings, Canada. Jeff Madura, International Financial Management, Different Editions.
- Meese, R., & Rogoff, K. (1983). Empirical exchange rate models of the seventies: Do they fit out of sample? *Journal of International Economics*, 14, 3-14.
- Obstfeld, M., & Rogoff, K. (1995). Exchange rate dynamics redux, *Journal of Political Economy*, 103(3), 624–660.
- Obstfeld, M., & Rogoff, K. (2000). New directions for stochastic open economy models, *Journal of International Economics*, 50(1), 117–153.
- Stockman, A., & Ohanian, L. (1997). Short run independence of monetary policy under pegged exchange rates and the effects of money on exchange rates and interest rates, *Journal of Money, Credit and Banking*, 29(4), 780–806.
- Takayasu, M. et al (2006). Temporal characteristics of moving average of foreign exchange markets, *Practical Fruits of Econophysics*, Japan: Springer Tokyo, 29-32.

## Websites

- Foreign investment in Saudi Arabia: Document WT/TPR/S/256: The Kingdom of Saudi Arabia:  
<http://www.lawteacher.net/company-law/essays/foreign-investment-in-saudi-arabia.php>  
 Wikipedia: [http://en.wikipedia.org/wiki/Cooperation\\_Council\\_for\\_the\\_Arab\\_States\\_of\\_the\\_Gulf](http://en.wikipedia.org/wiki/Cooperation_Council_for_the_Arab_States_of_the_Gulf)

## Disclaimer & Author(s)' identification

*“The work in this article depends mainly on accumulated readings in the topic over time as a result of teaching international finance for a long time.” Ghada Mohamed*

The principal author is Dr. Ghada Goma A. Mohamed, PhD in Economics from Carleton University in the specialization of international financial economics, PDF in the impact of media during global financial crisis from the University of Ottawa, and another PDF from Telfer School of Management, University of Ottawa, Canada. Dr. Ghada G. Mohamed is also a senior economist at ECO-ENA: Economics & ECO-Engineering Associate, Inc., Ottawa, Ontario, Canada and a registered consultant in international development at CIDA Canada. She is currently an assistant/associate professor at King Abdulaziz University, Jeddah, Saudi Arabia. For correspondence you may contact Dr. Ghada G. Mohamed at [ghadagomaa1@yahoo.ca](mailto:ghadagomaa1@yahoo.ca) or [gmohamed@eco-ena.ca](mailto:gmohamed@eco-ena.ca)

The second author is Dr. Nisreen Ismail M. Al-Banawi, PhD in Economics from Bradford Center of Intenatio, Bradford, UK. She is currently a senior assistant professor at King Abdulaziz University and the head of Economics department in the female section. Dr. Nisreen Al-Banawi's main task in the paper is helping in contributing with needed material about Saudi Arabia, discussion, and comments giving. Other compiled Arabic materials have been given to the principal author by Dr. Al-Banawi that helped the principal author to digest the foreign policies atmosphere of the country. Those materials are not mentioned to in the reference list because they are not used directly in the paper but it's always believed that without clear understanding of the political and social culture of the country in question, the economic analysis cannot be done accurately.

The empirical analysis has been done in this paper are done by utilizing version 5.1 of EViews.

## Appendix

Table 1. The balance of payment status, the current account status, and the capital account status by millions of dollars: (Saudi Arabia)

Year	Balance of Payment status by millions of dollars	Current account status by millions of dollars	Financial account status by millions of dollars
1980	3937.03	51497.8	-37566.2
1981	9568.46	50675.4	-30058.8
1982	-2307.57	17321.2	-9882.82
1983	-1508.71	-7615.58	15343.2
1984	-1479.79	-9518.1	16920.6
1985	-709.427	-4483.54	12222.1
1986	-7613.81	-3987.86	4172.41
1987	2635.03	-1536	12396.3
1988	-1519.44	1666.67	5813.6
1989	-3508.16	1202.67	6022.13
1990	-5372.74	11469.3	-1222.67
1991	47.64	-7301.33	27558.4
1992	-5657.54	-3338.67	12059.2
1993	1493.75	-749.867	18738.2
1994	-145.882	7704.93	10326.9
1995	1215.16	11375.6	6533.29
1996	5741.43	16271.9	5061.92
1997	647.132	15419.3	342.061
1998	-717.874	1902	12414.1
1999	2814.62	14469.1	2403.63
2000	2664.75	29806.9	-11652
2001	-1908.77	24573.2	-11262.2
2002	2735.97	27826.7	-9137.13
2003	1608.1	42931.2	-26439.9
2004	4497.77	65581	-47428.2
2005	63963.5	104839	8361.44
2006	70910.4	115847	-7496.93
2007	79818.8	110436	2121.41
2008	137043	155334	34728.5

Source: IMF: International Financial Yearbook (2010). *Capital account status is zero in all years.*

Table 2. The outflows of the foreign direct investment, the inflows of the foreign direct investment, the outflows of the portfolio investment, and the inflows of the portfolio investment (By millions of dollars): (Saudi Arabia)

Year	Foreign Direct Investment abroad	Foreign Direct Investment (in the country)	Portfolio Investment (Assets)	Portfolio Investment (Liabilities)
1980	0	-3192.31	-22007.4	0
1981	0	6498.14	-32808.2	0
1982	0	11128.4	-11487.2	0
1983	0	4943.9	7530.77	0
1984	0	4849.86	13413	0
1985	0	491.423	8414.92	0
1986	0	965.936	3460.1	0
1987	0	-1173.33	6142.93	0
1988	0	-328	3056.27	0
1989	0	-653.333	-1783.2	0



1990	0	1861.33	-3337.33	0
1991	0	160	470.4	0
1992	0	-78.933	-6491.47	0
1993	0	1367.2	8202.03	0
1994	0	349.333	-2524	0
1995	0	-1874.67	4051.15	0
1996	0	-1127.47	-2638.34	0
1997	0	3039.47	-7352.07	0
1998	0	4283.47	6931.95	0
1999	0	-778.933	11700	0
2000	0	-1881.07	-9378.18	0
2001	0	19.64	-2797.3	0
2002	0	-614.133	7551.97	0
2003	0	-586.507	-18738	0
2004	0	-334.32	-26654.3	0
2005	350.139	12106.7	350.406	na
2006	38.718	18317.5	-11948.7	na
2007	135.023	24334.9	-5475.92	na
2008	-3497.6	39455.7	-3847.47	2217.07

Source: IMF: International Financial Yearbook (2010)

Table 3. Exports of goods, Imports of goods, Exports of services, and Imports of services: (By millions of dollars): (Saudi Arabia)

Year	Exports of goods	Imports of Goods	Exports of Services	Imports of services
1980	101574	-25562.5	5191.27	-30230.8
1981	112422	-29889.1	7021.42	-40236.4
1982	74202.8	-34444	4565.12	-34852.4
1983	45864.3	-33217.9	4150.8	-37258.7
1984	37544.6	-28557.2	4112.03	-32856.5
1985	27478.3	-20363.7	3561.43	-25821.8
1986	20168.6	-17052.3	2603.71	-20319.7
1987	23168	-18258.7	2512	-18805.3
1988	24344	-19778.7	2290.67	-14914.7
1989	28346.7	-19205.3	2506.67	-19848
1990	44354.7	-21496	3026.67	-22384
1991	47725.3	-25936	2904	-38752
1992	50220	-30207.5	3461.87	-32239.2
1993	42338.7	-25838.7	3278.67	-24431.7
1994	42557.3	-21296.5	3342.13	-18368.4
1995	49974.1	-25616.3	3475.47	-19257.5
1996	60647.7	-25324.5	2768.53	-24262.8
1997	60651.5	-26334.9	4250.93	-25928.9
1998	38770.1	-27497.9	4723.2	-16858.3
1999	50688.9	-25683.2	5372.53	-18829.7
2000	77480.5	-27704	4778.93	-25228
2001	67972.8	-28607	5007.75	-19280.8
2002	72464.3	-29624.3	5176.93	-19979.7
2003	93244.1	-33867.7	5712.8	-20857.4
2004	125998	-41050.4	5851.73	-25695.7
2005	180712	-54595.3	11409.9	-33120.4
2006	211305	-63914.3	14201.3	-49580.5
2007	233330	-82597.5	15988.8	-62681.8
2008	313481	-101454	9373.07	-75231.2

Source: IMF: International Financial Yearbook (2010)

Table 4. The official foreign exchange rate, the foreign exchange rate index, the national income in millions of dollars, the inflation rate, and the interest rate: (Saudi Arabia)

Year	Official foreign exchange rate (Period average)	Foreign exchange rate index (2005 = 100)	National income by millions of dollars	Inflation rate	Interest rate (Deposit rate)
1980	3.3267	112.6	160651.696876785	36.6733466933868	na
1981	3.3825	110.8	183402.80857354	8.79765395894428	na
1982	3.4282	109.3	158202.555276822	-5.25606469002696	na
1983	3.4548	108.5	134783.489637606	-7.39687055476532	na
1984	3.5238	106.3	125242.635790908	-2.61136712749613	na
1985	3.6221	103.5	107647.497308191	-6.46687697160883	na
1986	3.7063	101.2	91897.5797965626	-18.5497470489039	na
1987	3.75	99.9	90216	3.72670807453417	6.68
1988	3.75	99.9	93456	-4.79041916167663	8.029
1989	3.75	99.9	100202.666666667	7.96645702306077	9.036
1990	3.75	99.9	121112	13.0097087378641	8.014
1991	3.75	99.9	133754.666666667	3.09278350515461	5.829
1992	3.75	99.9	137658.666666667	-0.833333333333333	3.649
1993	3.75	99.9	134578.666666667	-3.02521008403358	3.521
1994	3.75	99.9	134898.666666667	1.03986135181972	5.1
1995	3.75	99.9	144456	5.8319039451115	6.178
1996	3.75	99.9	157562.666666667	7.13128038897889	5.469
1997	3.75	99.9	164712	1.96671709531018	5.79
1998	3.75	99.9	147072	-14.0949554896143	6.211
1999	3.75	99.9	163082.666666667	11.39896373057	6.137
2000	3.75	99.9	189357.333333333	11.6279069767442	6.667
2001	3.75	99.9	184786.666666667	-3.47222222222222	3.922
2002	3.75	99.9	189853.333333333	2.87769784172662	2.234
2003	3.75	99.9	215314.666666667	5.73426573426571	1.631
2004	3.75	99.9	252474.666666667	10.8465608465609	1.734
2005	3.7471	100	316012.38290945	19.3317422434368	3.754
2006	3.745	100.1	360464.619492657	9.5	5.02
2007	3.7475	100	391666.444296197	5.63835616438357	4.79
2008	3.75	99.9	475093.333333333	18.6264847761813	2.885

**Source:** IMF: International Financial Yearbook (2010) – The data of the national income is modified by calculating the national income in millions of dollars from the national income of billions of Saudi Rials. The inflation rate is calculated from the GDP deflator of Saudi Arabia.



This work is licensed under a [Creative Commons Attribution 3.0 License](https://creativecommons.org/licenses/by/3.0/).