

## **Foreign Direct Investment Inflows and Economic Growth in Saudi Arabia: A Co-integration Analysis**

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**Abstract:** This paper aims to conduct a co-integration analysis of foreign direct investment (FDI) inflows and economic growth in Saudi Arabia from 1980 to 2010. This study uses the Johansen-Juselius technique for co-integration and finds that FDI has a positive but insignificant role in economic growth in the country over the long term. However, results show that government expenditure affects economic growth both positively and significantly in the long term. In contrast, estimates of the ECM techniques demonstrate that domestic capital and the labor force have a positive and significant influence on economic growth in the short term. Based on the Wald test statistics with zero restrictions, the Granger causality test implies that domestic capital and government expenditure drive output growth in the economy. This result is also consistent with the IRFs of a one-standard shock in the dependent variable over a time horizon of 10 years.

**JEL Classifications:** F43, O11, O38

**Keywords:** GDP, FDI, Government expenditure, Co-integration, ECM, IRFs, VDA

### **1. Introduction**

Foreign direct investment (FDI) plays a significant role in accelerating economic growth in developing countries. FDI has assisted some of developing economies (such as India and China) and newly industrial economies (NIEs) (such as South Korea, Singapore, Hong Kong and Taiwan) to witness high levels of growth and development (Uzoigwe, 2008). This prospect of FDI has led to a shift in the reliance on trade during the 1970s and mid-1980s with respect to the FDI flows in developing countries. The harmful effect of East Asian financial crisis in 1997 also influenced developing countries to shift more toward FDI because of its steady effects on economic growth. The promotion of FDI for economic growth is significantly influenced by nature and policy of the host country regime.

The economy of Saudi Arabia is an oil-rich economy that possesses an 85% share of the total revenue in the country. Saudi Arabia contains the largest reservoir of petroleum and currently dominates the world economy as one of the largest exporters of petrochemicals. In the recent past, Saudi Arabia has diversified its structural base and endeavored to optimize the private sector role in its development programs. This effort results from an essential need to incorporate its economy with the rest of the world via additional trade and investment-related matters. Foreign investors have served as a catalyst with the private sector in meeting the global requirements of Saudi Arabia. The country revised its foreign investment laws in 2000 with more liberal attitudes toward both domestic and foreign entrepreneurs, including revising trade-related and corporate laws and attaining WTO membership. These efforts have enabled Saudi Arabia to improve its world ranking in the Doing Business Index from 67<sup>th</sup> to 13<sup>th</sup> in 2009 (World Bank, 2010). Therefore, Saudi Arabia

is among the top 10 most attractive destinations for FDI inflows in the world economy. The objective of this study is to empirically examine the FDI growth nexus in Saudi Arabia from 1980 to 2010. The study applied the Johansen-Juselius (1990) co-integration approach and error correction model (ECM) techniques to determine the short- and long-term relationships between economic growth and FDI flows in Saudi Arabia.

## 2. Literature Review

The FDI inflows in a country depend on a host of socioeconomic and political factors that include economic stability, market growth prospects, infrastructure availability, laws and policies related to investments, taxation, trade, wage rates, financial markets, government expenditures, industrial regulations, and educated and skilled workforces. There is a wide range of literature on the issue of the efficacy of FDI, its determinants and its role in economic growth and development. Economists generally agree that FDI should be treated as a supplement to domestic capital and as a means to obtain appropriate technologies. Caves (1996) observed an increasing demand on the part of many countries to attract FDI because of its effects of spillover to the maximization of output, technology transfer, know-how, personnel training and access to international markets. Moreover, Borensztein (1998) observed that FDI is an important vehicle for maximizing growth. De Gregorio (2003) observed that a country's access to FDI can lead to an increase in its economic growth through the transfer of technology and know-how. These effects have enabled FDI to become three times more efficient than domestic investments. Furthermore, Borensztein, *et al.* (1998) and Drifford (2004) found that FDI has a direct effect on economic growth in a country, and Mellow (1997) and Markusen (1999) reported a positive correlation between FDI and economic growth. Additionally, Dees (1998) observed that FDI is an important factor for maximizing economic growth in China.

Neoclassical economic growth theory envisions that by increasing the per capita availability of capital, a country can maximize its FDI-led growth. Bengoa and Sanchez-Robles (2003) observed that although FDI is positively related to economic growth, its benefits could be maximized by the availability of human capital, thus ensuring economic stability and the opening of markets. With regard to this concern, Borensztein (1998) observed that the growth prospects of an economy depend on the level of interaction between FDI and human capital. He argued that the technological absorptive capacity of an economy may maximize its growth prospects together with FDI inflows in the country. Similarly, Balasubramanyam (1999) found a positive interaction between FDI and human capital those results in economic growth. UNCTAD (1999) noted that the positive effects of FDI on economic growth depend on the performance of the countries in terms of GDP per capita, educational level, the level of domestic capital, political stability, the terms of trade and the level of financial development.

In their study, Alguacil, *et al.* (2002) found that FDI has an export-linked nexus in Mexico. In a study by Kamaly (2002), economic growth and the lagged value of the ratio of FDI to GDP were identified as the only significant factors of FDI flows to the Middle East and North Africa (MENA) regions. Brock (2005) observed that FDI has played a transition role in Russia during its transition phase. Similarly, Goss, *et al.* (2007) observed that foreign capital accounted for 16% of productivity growth during that period in a study using Cobb-Douglas production for the United States. Moreover, Kornecki, *et al.* (2006) used the Cobb-Douglas production function in a study, observing that output is determined by labor, gross fixed capital formation and export and that foreign capital accounts for 23% to 28% of the economic growth in the United States. Other economists have expressed different views. In their empirical work, Carkovic and Levine (2002) found that each type of FDI has different effects on economic growth. Furthermore, Lipsey (2002) found that FDI does

not always have a substantial spillover effect for the local economy. In his study of FDI and growth, Alfaro (2003) found that FDI has a negative influence on the primary sector, a positive influence on the manufacturing sector and an ambiguous influence on the service sector, and he argued that FDI does not always have positive spillover effects for host countries.

In response to concerns regarding the FDI flows in Saudi Arabia, the Saudi Arabia General Investment Authority (SAGIA, 2010) has played a crucial role in opening the economy. Moreover, in his work on the factors that affect FDI locations in the petrochemical industry, Binsaeed (2009) found that FDI is attracted by location-specific factors that include costs factors, market factors, infrastructure and technological factors, political factors, and social and cultural factors. In his study of the determinants of FDI inflows in Saudi Arabia using the Granger causality test, Rehman (2004) found that the causality from FDI to economic growth is insignificant. The current study uses the Johansen-Juselius (1990) co-integration techniques and vector error correction model (VECM) estimation techniques to examine the short- and long-term relationships between FDI and economic growth in Saudi Arabia during the period from 1980 to 2010.

### 3. Trends in the Inflow of FDI in Saudi Arabia

Table 1 shows the FDI flows in selected West Asian countries during the period from 1980 to 2010. A substantial change in the magnitude of FDI flows occurred among the West Asian countries after the mid-2000s in response to the improved socioeconomic fundamentals, effective cost factors and changes in many favorable policy variables in these countries.

**Table 1.** FDI inflows in selected West Asian countries from 1980 to 2010 (US\$ millions)

	1980s	1990s	2000-05	2006	2007	2008	2009	2010
<b>Saudi Arabia</b>	2352.9	251.3	2659.5	17140	22821	38151	32100	28105
<b>Bahrain</b>	25.5	422.6	515.3	2915	1756	1794	257	156
<b>Lebanon</b>	1.5	397.8	2069.3	3132	3376	4333	4804	4955
<b>Oman</b>	119.6	91.1	314.2	1588	3431	2528	1471	2045
<b>Qatar</b>	0.5	160.3	916.0	3500	4700	3779	8125	5534
<b>Turkey</b>	168.3	771.7	3322.3	20185	22047	19504	8411	9071
<b>UAE</b>	55.6	70.9	4322.2	12806	14187	13724	4003	3948
<b>Total West Asia</b>	2796.5	2568.8	15383	67112	78211	91564	65993	58193

**Sources:** World Investment Report (various issues), UNCTAD, 2011.

The inflow of FDI in the West Asian countries shows a decline in the annual decadal average from US\$2796.5 million during the 1980s to US\$2568.8 million during the 1990s; subsequently, this measure increased to US\$15383.0 million during the 2000-2005 periods. The amount of FDI increased from US\$804.0 million in 1990 to US\$91564.0 million in 2008 and declined to US\$58193.0 million in 2010. The West Asia share among the developing countries increased from 2.3% in 1990 to 10.2% in 2010.

The FDI inflows in Saudi Arabia show a decline in the annual decadal average from US\$2352.9 million during the 1980s to US\$251.3 million during the 1990s but subsequently increased to US\$2659.5 million during the 2000-2005 periods. The amount of FDI inflows in Saudi Arabia declined from US\$6498.0 million in 1981 to US\$312.0 million in 1990, and the amount increased to US\$38151.0 million in 2008 and US\$28105.0 million in 2010. The Saudi Arabia share of the West Asian countries increased from 38.8% in 1990 to 48.3% in 2010. The country leads the rankings of West Asian countries in terms of the FDI flows in the country. Saudi Arabia is followed

by Turkey in the second position (with US\$9071.0 million) and Qatar ranked in the third position (with US\$5534.0 million) among the West Asian countries in 2010.

A significant aspect of the FDI inflows in Saudi Arabia is the increase in FDI by a factor of more than 194 since the enactment of the revised laws in 2000. This increase bypassed that of many developing countries of the world and caused Saudi Arabia to assume 8<sup>th</sup> place in terms of the recipients of FDI in the global economy. This advance is largely on account of the country's commitment to and enforcement of its clear foreign investment strategies, a good business climate, favorable macroeconomic fundamentals and the pursuit of the private sector role in the economy. This advance has led the country to improve its position to the rank of 13 in the Doing Business Index of the world economy (World Bank, 2010).

The GDP growth rate increased from 6.6% in 1980 to 8.3% in 1990 but declined to 3.7% in 2010. There appears to be no significant evidence of a specific relationship between FDI and GDP growth rates. FDI began to rise during the early 1980s, the GDP growth rate declined, and when FDI inflows decreased to minimal levels in to the mid -2000s, the GDP growth rate increased favorably. Moreover, when FDI inflows grew rapidly during the late 2000s, the GDP growth rate began to fluctuate.

#### **4. Model Specification, Data and Methodology**

The aim of this paper is to empirically analyze the role of FDI in the economic growth of Saudi Arabia from 1980 to 2010. The assumption is that economic growth is determined by the inflow of FDI, increments in domestic capital, government expenditures and labor force in the country. Our model is constructed by using the famous Cobb-Douglas production function:

$$Y = A K^\alpha L^\beta \quad (1)$$

where Y is the GDP, K is the domestic capital, L is the labor force and A refers to the productive efficiency factors. The capital can be treated as the sum of domestic capital ( $K_d$ ) and foreign capital ( $K_f$ ). The equation can be further specified as follows:

$$Y_t = A_t K_{dt}^\alpha K_{ft}^\lambda L_t^\beta \quad (2)$$

This model is based on the assumptions of growth theory as referenced by Solow (1956), Romer (1990) and Mankiw, *et al.* (1992), which are employed by Borensztein, *et al.* (1998), Ayanwale (2007) and Goss, *et al.* (2007). By taking the natural log of the above equation (2), we obtain the following:

$$\ln Y_t = a_t + \alpha \ln K_{dt} + \lambda \ln K_{ft} + \beta \ln L_t \quad (3)$$

where the coefficients  $\alpha$ ,  $\lambda$  and  $\beta$  represent the respective output elasticities in the model. For the purpose of empirical estimating, equation (3) is further adjusted by proxying domestic capital ( $K_{dt}$ ) with Gross Fixed Capital Formation (GFCF), as part of GDP, and by proxying foreign capital ( $K_{ft}$ ) with FDI, also part of GDP. With the introduction of error terms, equation (3) becomes

$$\ln Y_t = a_t + \alpha \ln GFCF_t + \lambda \ln FDI_t + \beta \ln L_t + \mu_t \quad (4)$$

where  $\mu_t$  is the stochastic disturbance term. Moreover, government uses oil revenue to invest in socio-economic overhead in the economy, which attracts further FDI inflows in the country. This situation has led to the inclusion of government expenditure (G) in the model. Thus the model is formally specified as follows:

$$\ln Y_t = a_t + \alpha \ln GFCF_t + \lambda \ln FDI_t + \gamma \ln G_t + \beta \ln L_t + \mu_t \quad (5)$$

#### 4.1 Data and Methodology

In this study, the data on GDP per capita, FDI inflows, gross fixed capital formation and government expenditures were obtained from the SAMA Annual Report (2011). The data on the labor force representing the economically active population were obtained from UNCTAD stat (UNCTAD, 2011).

**Table 2.** Summary statistics

Statistics	IY	IFDI	IG	IGFCF	IL
<b>Mean</b>	10.516	-0.331	12.014	3.001	15.500
<b>Median</b>	10.396	-0.357	11.936	2.976	15.536
<b>Maximum</b>	11.146	2.251	12.813	3.296	16.028
<b>Minimum</b>	10.085	-3.507	11.373	2.803	14.724
<b>Std. Dev.</b>	0.3176	1.696	0.394	0.1276	0.346
<b>Jarque-Bera</b>	2.886	1.802	3.101	1.856	1.863
<b>Probability</b>	(0.236)	(0.406)	(0.212)	(0.395)	(0.394)

In this analysis, the Johansen-Juselius (1990) approaches to co-integration and VECM techniques have been applied to trace the long- and short-term relationships between the variables of interest.

#### 4.2 Empirical Results

**Table 3.** Unit root test for stationarity  
(Asterisks \*\*\* indicate significance at 1%. )

Before conducting the co-integration test, the time series properties of the data has checked. To this end, the data were tested for a unit root using the augmented Dickey-Fuller test (1981), with an intercept at the individual level and at the first difference. The results are shown in Table 3, which shows that all variables are integrated with order 1(1).

Variables	ADF Test		Significance Level		
	Level	First Difference	1%	5%	10%
IY	-1.093	-4.070***	-3.670	-2.964	-2.621
IFDI	-1.246	-5.490***	-3.670	-2.964	-2.621
IGFCF	-2.297	-6.206***	-3.670	-2.964	-2.621
IG	-0.306	-4.825***	-3.670	-2.964	-2.621
IL	-2.178	-7.198***	-3.679	-2.968	-2.623

Following this outcome, the Johansen-Juselius technique (1990) was applied and found two co-integration vectors using the trace test and the max-eigenvalue test, as shown in Table 4.

**Table 4.** Co-integration test among the variables

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 percent Critical Value	Max-Eigen Statistics	5 percent Critical Value
None**	0.745288	98.54871	69.81889	38.29336	33.87687
At most 1**	0.664680	60.25535	47.85613	30.59477	27.58434
At most 2	0.529444	29.66058	29.79707	21.10753	21.13162
At most 3	0.262647	8.553045	15.49471	8.531287	14.26460
At most 4	0.000777	0.021758	3.841466	0.021758	3.841466

\*\*Trace test and max-eigenvalue test indicate two co-integration vectors that are both at the 5% level of significance.

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Our empirical regression shows that the long-term equation of economic growth during 1980-2010 in Saudi Arabia is

$$\Delta Y = 20.971 + 0.021\Delta FDI - 3.006\Delta GFCF + 1.64\Delta G - 0.996\Delta L$$

$$(0.732) \quad (-4.719) \quad (4.765) \quad (-3.196)$$

with t-values in the parentheses under estimated parameters.

This result shows that  $\Delta L$  and  $\Delta GFCF$  are highly significant but have a negative effect on output. This unexpected result could be due to the unique structure of the Saudi economy. Even though Saudi government started its developments plans since 1975 to diversify its income resources, the economy is still dependent largely on oil (one sector economy). The likely failure of the development plans could be attributed to the reallocation of capital and workers in the economy. While Saudi Arabian workers are located in the government sector, the private sector is dependent on non-Saudi workers. Saudi economy is ranked the second largest source of workers' remittances in the world (World Bank, 2011). Since workers' remittance is considered as a leak in the economy, then it would affect the Saudi economy negatively. The equation shows that the size of government expenditure is a highly significant, positive influence on the economic growth in the country. The role of FDI is positive, but it has an insignificant effect on the economic growth in the country. In quantitative terms, a 1% increase in FDI causes a mere 2% increase in the national income. The insignificant coefficient of FDI may result from government-restricted foreign investment policies and late entry into the favorable FDI regime.

**Table 5.** VECM estimates

<b>Independent Variables</b>	<b>Dependent Variables</b>				
	$\Delta \Delta Y$	$\Delta \Delta FDI$	$\Delta \Delta GFCF$	$\Delta \Delta G$	$\Delta \Delta L$
Constant	0.013 (0.475)	-0.028 (-0.109)	-0.034 (-1.397)	0.029 (1.057)	0.0622** (2.601)
$\Delta \Delta Y(-1)$	-0.010 (-0.341)	-2.476 (-0.865)	0.139 (0.532)	0.332 (1.092)	0.047 (0.179)
$\Delta \Delta Y(-2)$	-0.113 (-0.405)	3.568 (1.306)	0.268 (1.069)	-0.122 (-0.422)	-0.091 (-0.364)
$\Delta \Delta FDI(-1)$	-0.002 (-0.104)	-0.245 (-1.115)	0.007 (0.340)	-0.009 (-0.373)	0.022 (1.080)
$\Delta \Delta FDI(-2)$	0.028 (1.246)	-0.199 (-0.891)	-0.022 (-1.088)	0.044** (1.873)	-0.012 (-0.563)
$\Delta \Delta GFCF(-1)$	1.180** (3.460)	2.570 (0.768)	-0.600** (-1.959)	0.164 (0.463)	-0.251 (-0.822)
$\Delta \Delta GFCF(-2)$	0.340 (1.117)	6.241*** (2.094)	0.016 (0.060)	-0.193 (-0.611)	-0.281 (-1.034)
$\Delta \Delta G(-1)$	-0.298 (-1.161)	-1.915 (-0.761)	0.138 (0.598)	-0.118 (-0.442)	0.227 (0.988)
$\Delta \Delta G(-2)$	-0.568** (-2.424)	-2.935 (-1.279)	0.437** (2.080)	-0.049 (-0.164)	0.124 (0.593)
$\Delta \Delta L(-1)$	0.518** (1.719)	3.192 (1.082)	-0.0376 (-0.139)	0.193 (0.616)	-0.542** (-2.009)
$\Delta \Delta L(-2)$	0.071 (0.238)	1.794 (0.618)	0.136 (0.511)	0.090 (0.293)	-0.294 (-1.111)
$ECM_{t-1}$	-0.448** (-3.381)	-2.401** (-1.849)	0.051 (0.425)	-0.090 (-0.652)	0.155 (1.309)
$R^2$	0.657	0.376	0.590	0.459	0.309

**Note:** The values in parentheses denote t-statistics, and \*\* denotes rejection of the null hypothesis at the significance level of 5%.

The study has applied VECM techniques to estimate the short- and long-term relationships between the variables, and the outcomes are presented in Table 5 above.

Table 5 depicts the estimates of the coefficients of the error correction term ( $ECM_{t-1}$ ) for the dependent variable IY as negative and statistically significant. The  $ECM_{t-1}$  shows that 44% of the deviations in the long-term equilibrium can be adjusted within a one-year period. The short-term elasticity of the output with respect to capital and labor force is found to be positive and significant. The short-term elasticity of FDI and government expenditure in the economy is negative.

Thus, the above results show that FDI and government expenditure have a positive influence on economic growth in the long term. Furthermore, the estimates from the ECM techniques depict that domestic capital and labor force have a positive effect on economic growth in the short term.

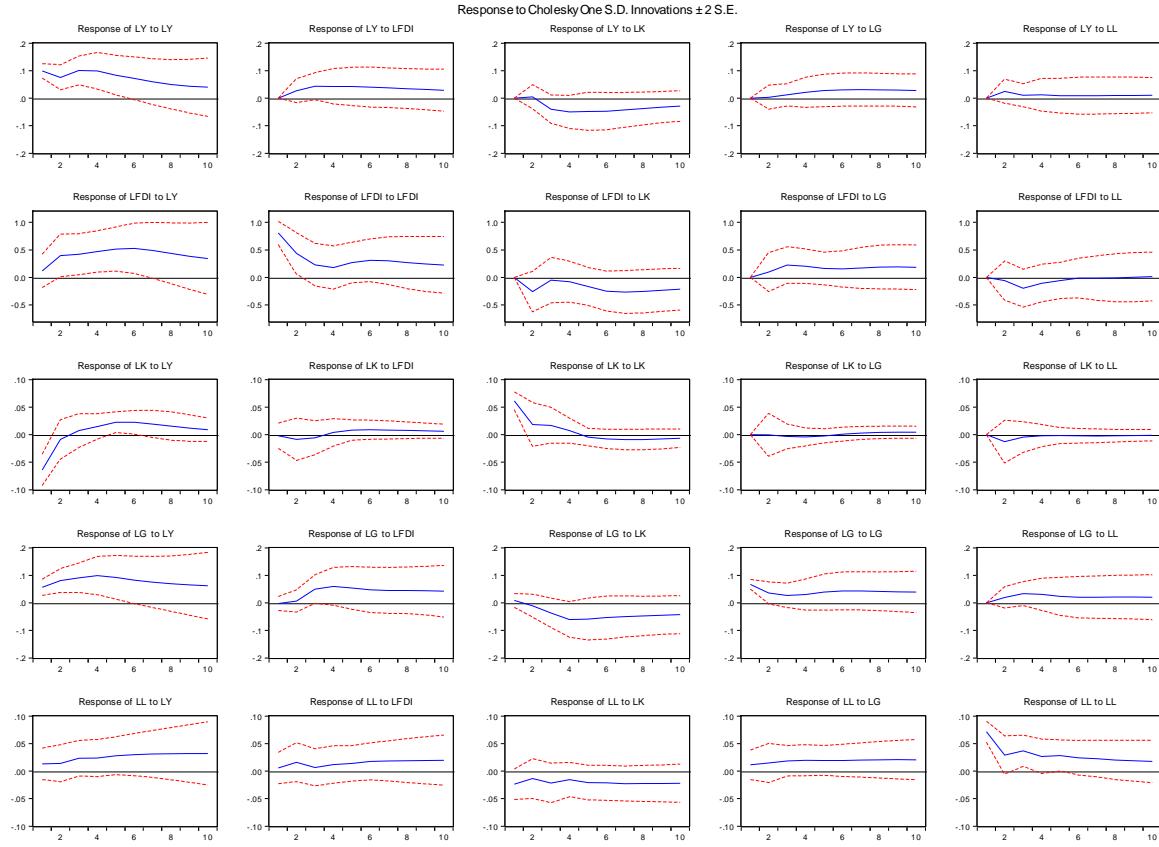
This study has further conducted a VEC Granger causality (Wald test) based on the VEC model estimates, and the results are shown in Table 6. The studies of Sims, *et al.* (1990), and Toda and Phillips (1993) have empirically shown that when the variables are co-integrated of order 1(1), the Granger causality test based on the Wald test statistics can be used to reveal their direction of causality. The tests involve the Granger causality test with zero restrictions. The Wald test statistics imply that capital and government expenditure Granger-cause output, but FDI and labor force do not Granger-cause output.

**Table 6.** VEC Granger causality test (Wald test),  $\chi^2$

	IY	IFDI	IGFCF	IG	IL
IY		2.169 (0.338)	1.628 (0.443)	0.149 (0.928)	1.262 (0.532)
IFDI	1.632 (0.442)		1.432 (0.489)	3.923 (0.414)	1.688 (0.430)
IGFCF	11.97 (0.003)	4.389 (0.111)		0.882 (0.644)	1.258 (0.533)
IG	6.891 (0.032)	2.098 (0.350)	4.542 (0.103)		1.258 (0.533)
IL	3.438 (0.179)	1.181 (0.554)	0.461 (0.794)	0.379 (0.827)	

**Note:** The values in parentheses denote the p-values.

Figure 3 below presents the outcome of the impulse response functions (IRFs) of the dependent variable IY of one-standard shocks in the explanatory variables over a period of 10 years. The response of the GDP to its own shocks is significant and positive for up to five years and becomes insignificant thereafter. The GDP response to FDI innovations is positive but insignificant. In response to FDI shock, GDP increases up to three years; subsequently, it remains constant. The response of IY to IGFCF reveals is insignificant and becomes negative after a three-year period. The response of IY to IG is positive and insignificant. The response increases from two years up to a six-year period and moves constantly up to 10 years. Thus, the shocks of FDI and government expenditure show a positive effect on output in the long term and are found to be consistent with earlier findings. Moreover, the figure shows that the response of IY to IL shocks is positive and significant over a two-year period and begins to decrease after three years. Similarly, the IRF response of the output shows the negative influence of IGFCF and IL in the short turn.



**Figure 3.** Impulse response functions (IRFs) of the dependent variable IY to one-standard shocks in the explanatory variables over a period of 10 years

Table 7 depicts the variance decomposition analysis, which measures the forecast error variance of the output using the shocks of the explanatory variables during the 10-year period. Most of the forecasting error variance of IY is caused by its own shocks during the first five years. The variable IGFCF accounts for 16% of the variation in GDP in three years but rises to 64% over a 10-year time horizon. During the 10-year period, the forecast error variance in the variable IY accounts for shocks in the IFDI inflows of 5%, in the labor force of 14.5% and in the domestic capital formation of 64%. The forecasting error variance of IY varies for IFDI by 4% to 7% during the 10-year time horizon. This observation also reveals that over a long period of time, the forecast error variance of IY tends to decline for its own shocks, whereas this variance tends to vary with IGFCF, IL and IFDI.

**Table 7.** Variance Decompositions

**(a) Variance Decompositions of IY:**

Period	IY	IFDI	IGFCF	IG	IL
1	100.000	0.000	0.000	0.000	0.000
2	96.673	0.989	0.101	2.022	0.214
5	43.504	5.436	41.209	1.138	8.714
6	31.710	6.311	50.568	0.779	10.633
9	17.857	5.068	62.582	0.534	13.959
10	16.043	4.796	64.113	0.555	14.492

**(b) Variance Decompositions of IFDI:**

Period	IY	IFDI	IGFCF	IG	IL
1	11.840	88.160	0.000	0.000	0.000
2	15.586	79.134	4.747	0.324	0.210
5	11.685	75.588	11.194	0.506	1.025
6	10.575	71.836	15.445	0.408	1.736
9	10.250	61.464	24.607	0.253	3.427
10	10.445	59.512	26.071	0.236	3.737

**(c) Variance Decompositions of IGFCF:**

Period	IY	IFDI	IGFCF	IG	IL
1	37.816	2.033	60.152	0.000	0.000
2	31.545	1.666	66.424	0.354	0.011
5	16.028	3.869	65.764	13.019	1.321
6	15.457	3.681	65.020	14.515	1.326
9	13.941	4.478	59.971	18.868	2.742
10	13.556	4.664	58.511	19.962	3.306

**(d) Variance Decompositions of IG:**

Period	IY	IFDI	IGFCF	IG	IL
1	36.976	0.507	15.071	47.447	0.000
2	50.301	0.302	9.698	39.443	0.257
5	40.486	12.461	6.448	39.894	0.715
6	38.309	13.402	7.924	39.052	1.313
9	33.292	14.824	12.183	36.916	2.785
10	32.325	15.079	12.922	36.597	3.077

**(e) Variance Decompositions of IL:**

Period	IY	IFDI	IGFCF	IG	IL
1	3.555	7.727	4.377	5.111	79.230
2	4.425	12.738	3.220	5.571	74.046
5	3.997	9.866	2.951	5.236	77.950
6	4.374	8.391	3.917	5.028	78.290
9	5.020	7.021	5.558	4.936	77.465
10	5.196	6.874	5.715	5.003	77.212

**Note:** Percentage of forecast variance explained by shocks.

## 5. Conclusion and Suggestion

This paper applied the Johansen-Juselius (1990) co-integration test and ECM techniques to examine the relationship between FDI and economic growth in Saudi Arabia from 1980 to 2010. The study found that FDI and government expenditure have a positive effect on the long-term economic growth in the country. In contrast, domestic capital and labor force have a positive influence in the short term. The poor performance of FDI in the economy may be attributed to the country's historically restrictive foreign investment policies and its late entry into the favorable FDI regime. This performance may be also resulted from the low absorbability of the inflow of FDI by the non-oil sectors of the economy. The insignificant influence of government expenditure on economic growth in the short term may be caused by the promotion of socio-economic development programs and large outflows of capital in the form of worker remittances. The outcome of the FDI inflows and the expansionary policy of the government are likely to respond positively in the future.

Although Saudi Arabia has been capitalized on its oil reserves, it has added advantages in natural gas, construction and transport services, which represent enormous opportunities for foreign investors. There is a need to pursue appropriate policies to expand Saudi Arabia's share of the world FDI and trade under the WTO regime. Despite these numerous challenges, Saudi Arabia has become successful in diversifying its structural base with increasing domestic and foreign sector roles within the country. These changes will enable the country to expand its job opportunities and to benefit from WTO entry.

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