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The Impact of Foreign Direct Investment (FDI) on Stock Market Development in GCC countries

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ABSTRACT

Despite the huge number of studies in relation to the FDI, studies on the nexus between FDI and stock market development in GCC are still limited. This paper investigates the impact of FDI on stock market development in Gulf Cooperation Council countries that have become an important economic trading bloc after inclusion of Saudi Arabia in the G-20, leading to a big increase in stock prices and FDI in recent years. This research utilised data from 2002 to 2015 for all the six GCC countries i.e. Bahrain, Kuwait, Qatar, Saudi Arabia, the United Arab Emirates and Oman. Using four control variables, economic growth, economic size, openness and domestic credit to private sector and utilising the panel unit-root test, panel co-integration analysis and panel error-correction model, the research concludes that foreign direct investment has played a long-term significant role in stock market development in GCC countries. Moreover, the research results on short-term impact concludes that FDI affects stock market development positively but not significantly. From a policy perspective, the research evidence convincingly supports the increasingly growing initiative of GCC governments to attract flow of FDI towards non-oil based sectors to diversify their economies and develop stock markets.

Keywords: Error correction model, foreign direct investment, Gulf Cooperation Council, Johansen Fisher panel co-integration test, stock market development

INTRODUCTION

Foreign direct investment (FDI) plays a substantial role in economic development of emerging countries by contributing in a variety of ways such as transfer of technology, creation of employment opportunities, increase in overall productivity, decrease in dependence on imports and enhancement

of export potential, thus leading to overall increase in economic growth (De Mello, 1999). In the past two decades, increasing volumes of direct investment has been flowing between and into developed countries (Vu & Noy, 2009). In 2015, FDI increased by 40% to USD1.8 trillion, the biggest increase in FDI since the financial crisis of 2008. Also, the FDI of developing countries reached USD765 billion in 2015, increasing by 9% compared with 2014 (United Nations Conference on Trade and Development [UNCTAD], 2016). Therefore, most developing countries try to increase their share of FDI by simplifying investment procedure, granting tax incentives, ushering in economic liberalisation and stabilising the economy. In addition, the financial system has been developed to include the financial market in order to direct foreign investment as this is crucial in the overall development of the economy. The positive response of all previous procedure in attracting FDI must be reflected in the development of the stock market (Adam & Tweneboah, 2009; Yartey, 2008). Therefore, the stock markets are considered a mirror that reflects the health and strength of the economy (Ramady, 2013). Empirical studies prove that institutional and regulatory reform, adequate disclosure and listing requirements and fair trading practices promote foreign direct investment in financial markets, leading to expansion and development of domestic markets. (Yartey, 2008).

There is a huge volume of studies in the literature that investigated the role of FDI on the host economy. Nevertheless, the role of FDI has been debated among researchers as well as between researchers and policymakers . It should also be noted that many researchers such as Djankov and Bernard (1999); Kawai (1994), and Mencinger (2003) have also recorded the negative and null effect of FDI in developing countries. Despite the extensive research regarding foreign direct investment, most of the studies have concentrated on the nexus between FDI and growth of GDP. However, only a limited number of research studies have investigated the direct link between FDI and development of the financial market.

In the last two decades, policymakers in the GCC countries have recognised the importance of increasing FDI to achieve economic growth so as to depart from sole dependency on natural resources. In addition, recent years have witnessed a big increase in stock prices, market capitalisation and trading volumes in GCC countries (Ramady, 2013). Hence, this research attempted to measure the impact of FDI on stock market development for all Gulf Cooperation Council (GCC) countries from the period 2002 to 2015 using panel data techniques. The importance of this research is twofold: Firstly, it provides new and recent evidence of the impact of FDI on stock market development in GCC countries. Secondly, it helps policymakers in directing FDI to contribute to achieving economic objectives and increasing the optimal uses of FDI in GCC economies.

The rest of this paper is ordered in the following way: Part 2 describes the

FDI, stock market and economy of the Gulf Cooperation Council (GCC). Part 3 summarises the literature review, while Part 4 lays down the research methodology, including the data and research model used in the study. Part 5 presents the empirical results and Part section 6 offers the conclusion.

FDI, Stock Market and Economy of Gulf Cooperation Council (GCC)

The Gulf Cooperation Council (GCC) is a political and economic alliance established in May 1981 by six Arab oil-exporting countries i.e. Oman, Saudi Arabia, the United Arab Emirates, Qatar, Kuwait and Bahrain. These countries have the same historical and cultural background and share the same economic characteristics. The GCC countries are considered the wealthiest countries in the world as per capita GDP, their economies are highly reliant on hydrocarbon exports and public expenditure in these countries is mainly financed by oil revenue. GCC countries aspire to reduce the exposure of their economies to oil price changes by diversifying their economies so as not to rely solely on oil revenue (Ramady, 2013). FDI plays an important role in implementing diversification strategies. Under certain circumstances, FDI can bring expertise, technological capacity and skills in addition to capital to economies that are not able to develop certain sectors on their own (Kurtishi-Kastrati, 2013). Empirical studies in relation to FDI have proved that FDI will be more beneficial in weak diversified economies such as the GCC countries than in highly diversified economies. (Nicet-Chenaf & Rougier, 2008). GCC countries have recognised the importance of this and have adopted new measures aimed at attracting and encouraging foreign direct investment. Policymakers of the GCC countries have provided new incentives in the last two decades to attract FDI to increase economic growth and develop their stock markets. These incentives include the establishment of a regulatory, institutional and legal framework to govern foreign investments. In addition, the GCC increased foreign ownership to 100%, reduced corporate taxes and improved foreign investors' access to local stock markets (Ramady, 2013).

Table 1 summarises FDI in GCC countries in 2005, 2010 and 2016. The GCC countries received a big share from FDI in the Arab world, reaching 64.86% in 2010. The table shows that from 2005 to 2010, Saudi Arabia was the biggest recipient of FDI among the GCC countries amounting to 64.39% in 2010. In 2016, FDI inflows fell to 38.28% compared with previous years. The United Arab Emirates has become the major recipient of FDI among GCC countries, with FDI reaching 46.16%. Overall, the two largest recipients of FDI among GCC countries have been Saudi Arabia and the United Arab Emirates. Over the past decade, GCC countries have sought to benefit greatly from FDI and to develop their financial markets as a policy priority among GCC countries. (Ramady, 2013).

Table1
FDI in GCC countries

Economy	FDI in USD in Each County			FDI in Each Country as Percentage (%) from GCC			FDI in Each Country as Percentage (%) from Arab World		
	2005	2010	2016	2005	2010	2016	2005	2010	2016
United Arab Emirates	10899931926	8796769641	8985705000	38.48	19.37	46.16	38.48	12.57	23.30
Bahrain	1048601306	1557710009.2	281914893.6	3.70	0.34	1.45%	3.70	0.22	0.73
Kuwait	233904109.6	1304627500	291958795.3	0.83	2.87	1.50%	0.83	1.86	0.76
Oman	1538361508	1242652796	1680894668	5.43	2.74	8.63%	5.43	1.78%	4.36
Qatar	2500000000	4670329670	773901098.9	8.83	10.29	3.98	8.83	6.67	2.01
Saudi Arabia	12106749694	29232706667	7452533333	42.74	64.39	38.28	42.74	41.76	19.33
GCC Countries	28327548545	45402857283	19466907790	100.00	100.00	100.00	61.57	64.86	50.48
Arab World	46007410075	70001307553	38562350207	162.41	154.18	198.09	100.00	100.00	100.00

LITERATURE REVIEW

There is a large volume of research that has investigated the influence of FDI on the host economy especially in terms of economic growth. Choe (2003) investigated the impact of FDI on the growth of the gross domestic product (GDP) using the Granger causality test in 80 developed and developing countries in the period from 1971 to 1995. The results showed that FDI led to growth of the GDP. Also, the bidirectional causality relationship between FDI and growth in GDP was documented by Al-Iriani (2007) for Kuwait, Oman, Bahrain, the United Arab Emirates and Saudi Arabia. Similar results on positive influence of FDI on growth of GDP were documented by Faras and Ghali (2009), Umoh et al. (2012) and Szkorupova (2014), while Srinivasan et al. (2011) studied the long- and short-term effects of FDI on growth of GDP in five ASEAN economies using advanced econometric techniques, including causality tests, co-integration and the error correction model. The results proved the existence of short-term causality between FDI and GDP and provided evidence of long-term influence of FDI on the growth of GDP. Also, Sothan (2016) studied the direct influence of FDI on the growth of GDP on long- and short-term periods. He used samples from 21 Asian countries and utilised panel co-integration and the Granger causality analysis to conclude on the existing bidirectional causality relationship between FDI and growth of GDP. In addition, he proved the long-term influence of FDI on the growth of GDP.

The null effect of FDI on growth of GDP has also been documented by many researchers such as Chowdhury and Mavrotas (2006); Manuchehr and Ericsson (2001), and Sarkar (2007). Others such as Djankov and Bernard (1999); Kawai (1994), and Mencinger (2003) have also documented the negative influence of FDI .

Although the literature records considerable investigation into the direct link between FDI and GDP in the host country, a few studies have investigated the direct link between FDI and development of the financial market in developing countries, especially in the Arab world. Adam and Tweneboah (2009) measured the influence of FDI on the development of Ghana's financial market. They used the co-integration technique and the error correction model, and their results confirmed the long-term link between FDI and the development of Ghana's financial market. They concluded that shock to FDI impacted on the development of Ghana's financial market. In a similar study, Al Nasser and Soydemmir (2011) examined the link between FDI and the development of 14 Latin American financial markets from 1978 to 2007. The results showed the existence of a bidirectional link between FDI and development of the financial market, and the researchers concluded that FDI allowed for and enhanced the development of the financial market. In another recent study, Shahbaz et al. (2013) provided evidence of the direct influence of FDI on the development of the Pakistani financial market. Fauzel (2016) studied the

role of FDI in development of the financial market. He used samples from small island countries for the period 1990 to 2013. The study found that FDI had a significant influence on the development of financial markets.

Raza and Jawaid (2014) utilised advanced techniques in econometrics, including the causality test and error correction model to capture the effect of FDI on the development of 18 Asian financial markets from 2000 to 2010. They found that FDI negatively affected long- and short-term market capitalisation, and they concluded that FDI can mislead investors. A similar study by Musa and Ibrahim (2014) utilised advanced techniques in econometrics, including co-integration and the error correction model to measure the influence of FDI on the development of the Nigerian financial market between 1981 and 2010. They concluded that there existed no significant role in the long-run of FDI on the development of the Nigerian financial market. In a similar study, Bayar and Ozturk (2016) studied the link between FDI and development of financial markets in Turkey during the 1974-2015 period. They concluded that there was unidirectional causality between FDI and financial development in Turkey.

In light of these empirical studies, it can be noted that there is mixed evidence on the effect of FDI on the host economy. Moreover, no previous research has studied the direct effect of FDI on stock market development. Therefore, this research fills the gap in the literature by examining the influence of FDI on stock market development in Gulf Cooperation Council countries.

METHODS

Research Data

The research data were collected from the World Bank database for all the six Gulf Cooperation Council (GCC) countries from 2002 to 2015. In order to examine the impact of FDI on stock market development , the research utilised four control variables that have been used widely in the literature: economic growth, economic size, openness and domestic credit to private sector for the GCC countries, which are Oman, Saudi Arabia, the United Arab Emirates, Qatar, Kuwait and Bahrain.

Stock Market Development

There are different measures for stock market development in the literature such as size, market liquidity market concentration and market volatility, to name only three. This research used market capitalisation as a proportion of GDP to measure stock market development in GCC countries because it is less arbitrary than other measures of stock market development (Demirguc-Kunt & Levine, 1996). This measure is equal to market value of shares traded divided by GDP (% of GDP), denoted by ST.

Foreign Direct Investment (FDI)

Foreign direct investment indicates the direct investment equity flows in the reporting economy. It is the sum of equity capital,

reinvestment of earnings and other capital. Most empirical studies related to FDI use the net FDI inflows as a percentage of GDP (% of GDP) to proxy FDI (Alfaro et al., 2004; Azman-Saini et al., 2010; Asongu, 2016.; Bahri et al., 2017).

Economic Growth

Economic growth is defined as the annual percentage growth rate of GDP at market prices based on constant local currency. This measurement is supported by most of the empirical studies such as (Alfaro et al., 2004; Azman-Saini et al., 2010; Bahri et al., 2017; Bongini et al., 2017). This variable is denoted by GROWTH.

Openness

Openness usually refers to a unit of the country's economic policy measurement, also expressed as the trade openness index. Most of the empirical studies proxy openness as a proportion of the sum of exports and imports to GDP (% of GDP) such as Gries et al. (2009) and Yanikkaya (2003). This research used this measurement to estimate openness in GCC countries and denoted the trade openness index as 'openness'.

Domestic Credit to Private Sector

Domestic credit to private sector indicates the financial resources provided to the private sector that establish a claim for repayment. Domestic credit to private sector is measured as proportion of GDP (% of GDP) and denoted by CR. This variable is

widely used in empirical studies (Bahri et al., 2017; Bongini et al., 2017; Nezakati et al., 2011).

Economic Size

This research used the natural logarithm of GDP as proxy of economic size, which is commonly used in the literature. GDP is calculated at purchaser's prices and is equal to the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products (Anwar & Nguyen, 2010; Sothan & Zhang, 2017). This variable is denoted by 'size'.

Research Model

Panel data analysis techniques were utilised to measure the impact of FDI on the development of the financial market; they included the panel unit root test, panel co-integration test and panel error correction model (ECM). The equations below were used for ECM in the long and short term.

Long-Term model:

$$STOCK_t = a_0 + \sum_{j=1}^{p_i} \varphi_1 \, STOCK_{i,t-j}$$
$$+ \sum_{j=1}^{p_i} \varphi_2 \, FDI_{i,t-j} \; +$$
$$\sum_{j=1}^{p_i} \varphi_3 \, GROWTH_{i,t-j}$$
$$\sum_{j=1}^{p_i} \varphi_4 \, OPENNESS_{i,t-j} \; +$$
$$+ \sum_{j=1}^{p_i} \varphi_5 \, SIZE_{i,t-j} +$$
$$\sum_{j=1}^{p_i} \varphi_6 \, CR_{i,t-j} \; + \varepsilon_{i,t}$$

Short-term model:

$$\Delta STOCK_t = a_0 + \sum_{j=1}^{p_i} \beta_1 \Delta \text{ STOCK}_{i,t-j}$$
$$+ \sum_{j=1}^{p_i} \beta_2 \Delta \text{ FDI}_{i,t-j} +$$
$$\sum_{j=1}^{p_i} \beta_3 \Delta \text{ GROWTH}_{i,t-j}$$
$$\sum_{j=1}^{p_i} \beta_4 \Delta \text{ OPENNESS}_{i,t-j}$$
$$+ \sum_{j=1}^{p_i} \beta_5 \Delta \text{ SIZE}_{i,t-j} +$$
$$\sum_{j=1}^{p_i} \beta_6 \Delta \text{ CR }_{i,t-j} +$$
$$\lambda_1 ECT_{i,t-j} + \varepsilon_{i,t}$$

φ_i represents the coefficients in the long term for the research variables, while β_i represent sthe coefficients in the short term, where, $i=1,\dots$ and N represents the cross-sectional panel members for the period t , while p_i is the length of the lag. **ECT** is the error correction term lagged by one period obtained from the long-term equation. It represents the adjustment coefficient and must be significant, negative and less than one to prove a long-term relationship. ε_t is the serially uncorrelated disturbance with a zero mean and constant variance.

RESULTS

Descriptive Statistics

Table 2 displays the descriptive statistics of FDI in the GCC countries, including central tendency, dispersion and the normality test. The table indicates that Bahrain attracted the highest FDI, while Oman attracted the least. The results of the Jarque-Bera test indicates acceptance of the null hypothesis of normality, except for Bahrain. Therefore, we can conclude that almost all the times series for FDI in the GCC countries used normal distribution.

Table 2
Descriptive statistics of foreign direct investment in Gulf countries

	Mean	Max.	Min.	Std. Dev.	Skew	Kurt	Jarque-Bera	Prob.
Bahrain	0.049249	0.157506	0.006058	0.0402	1.5003	5.0085	7.0627	0.0292
Kuwait	0.005754	0.021159	-0.0014	0.0071	0.9511	2.6541	2.0247	0.3633
Oman	0.026167	0.079175	0.001154	0.0231	0.9115	2.9735	1.8007	0.4064
Qatar	0.031225	0.083076	-0.00416	0.0262	0.3332	2.1478	0.6827	0.7108
Arab Saudi	0.030652	0.084964	-0.00326	0.0295	0.5058	1.9579	1.2305	0.5404
United Arab Emirates	0.032525	0.067672	0.000868	0.0214	0.2702	1.9169	0.7935	0.6724

Unit Root Test

Investigating a long-term relationship requires integration of all equation variables in the same order. Table 3 and Table 4 represent the findings of the Augmented Dickey-Fuller Test and the Phillips-Perron Test at level and first difference. The results indicate rejection of the unit root null hypothesis at the first difference for all the variables, confirming that all the times series of researched variables were integrated at the first order.

Table 3
Estimation of Panel Unit Root Test (ADF-Fisher)

	At level	At the first difference
	ADF-Fisher Chi-Square	ADF-Fisher Chi-Square
ST	17.0811	32.1710***
FDI	15.7817	43.3986***
GROWTH	20.4261	67.0271***
OPENNESS	4.68334	44.7107***
SIZE	0.99911	23.6452**
CR	1.36557	20.1349*

*** shows significance at 1% level; ** shows significance at 5; * shows significant at 10 %

Table 4
Estimation of Panel Unit Root Test (Phillips-Perron)

	At level	At the first difference
	PP-Fisher Chi-Square	PP-Fisher Chi-Square
ST	17.6241	61.3060***
FDI	15.7796	75.5243***
GROWTH	18.3049	117.274***
OPENNESS	3.33912	53.5031***
SIZE	0.20467	37.3040***
CR	0.94325	31.5916***

*** shows significance at 1% level; ** shows significance at 5; * shows significant at 10 %

Multicollinearity Test

Before proceeding to the co-integration test and the error correction model, we applied the tolerance and the Variance Inflation Factor (VIF) to check for the existence of multicollinearity in the estimated model. The results of the tolerance test showed that all the independent variables had a low tolerance value, indicating that all the variables under consideration were almost the perfect combination of the other independent variables in the estimated model. The table shows that the value of the VIF for all the independent variables was less than 10, indicating no collinearity among the independent variables in the estimated model.

Table 5
Results of Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
FDI	0.76	1.316
GROWTH	0.896	1.116
OPENNESS	0.574	1.743
SIZE	0.923	1.083
CR	0.586	1.708

Co-Integration Test

This paper uses the Johansen co-integration test to discover existence of a long-term link between FDI and financial market development in GCC countries.

The results of the Johansen test based on a trace test and maximum Eigenvalue test are listed in Table 6. The results of the trace test and the maximum Eigen test indicated rejection at a 5% significant level;

according to the null hypothesis of Johansen Fisher Panel Co-integration, there is no co-integration. Moreover, the findings of the Johansen Co-Integration test concludeed that there was only one co-integration relationship between the variables. This indicates existence of a long-term link between FDI and development financial market in GCC countries.

Table 6
Estimation of Panel Co-Integration (Johansen Test)

Hypothesised No. of CE(s)	Eigenvalue	Trace Statistic	Max-Eigen Statistic
None *	0.532473	109.4889**	40.29579**
At most 1	0.437423	69.19308	30.48708
At most 2	0.345237	38.70600	22.44454
At most 3	0.205579	16.26146	12.19754
At most 4	0.070223	4.063927	3.858934
At most 5	0.003860	0.204993	0.204993

*** shows significance at 1% level; ** shows significance at 5%

Error Correction Model

This research used the error correction model to capture the influence of FDI and control variables on financial market development. The results of two equations, the long-run equation and short-run equation, are provided in the table below.

As noted in the table, the long-term elasticity of financial stock market development to FDI was positive for the period studied and statistically significant at 1%. The long-term elasticity of financial market development to economic growth

and domestic credit to private sector was positive and significant at 1%. On the other hand, the long-term elasticity of the financial market development to openness and economic size were negative and significant at 1%. The results of the short-term equation showed that the short-term elasticity of stock market development to FDI was positive but not statistically significant. Likewise, short-term elasticity of stock market development to openness, economic size and domestic credit to private sector was not statistically significant, while the short-term elasticity of financial

market development to economic growth was positive and statistically significant at 1%. The results also showed that the value of error correction confirmed the long-term link between the independent variables and FDI.

Table 7
Estimation of Error Correction Model

Co-Integrating Equation		Error Correction	
ST(-1)	1.000000	CointEq1	-0.100394**
FDI(-1)	0.242105***	D(ST(-1))	0.390672***
GROWTH(-1)	0.187355***	D(FDI(-1))	0.007723
OPENNESS(-1)	-0.021180**	D(GROWTH(-1))	0.033737**
SIZE(-1)	-0.452683***	D(OPENNESS(-1))	-0.005155
CR(-1)	0.058305***	D(SIZE(-1))	0.640161
C	8.561646	D(CR(-1))	0.019104
		C	-0.085872
		R-squared	0.301297
		Adj. R-squared	0.192609
		F-statistic	2.772145

*** shows significance at 1% level; ** show ssignificance at 5%

Testing for Serial Correlation and Heteroscedasticity

Serial correlation (also called autocorrelation) occurs when the error term for one-time period is associated with the error for the next period. If the serial correlation exists in the model, the estimated coefficients will be biased and inconsistent. In this research, we applied the Lagrange multiplier (LM) test on the residual of error correction model. The null hypothesis of the test was that there was no serial correlation in the residuals up to the specified order. Table 8 shows the results of the Lagrange multiplier (LM), indicating acceptance of the null hypothesis for this test. This means that there was no serial correlation in the estimated model and the estimated coefficients were unbiased.

Table 8
Lagrange Multiplier (LM) Test

Lags	LM-Stat	Prob
1	36.67721	0.4373
2	42.84306	0.2011
3	24.19347	0.9333
4	33.47364	0.5893
5	25.96944	0.8913
6	29.64735	0.7636
7	24.70295	0.9226
8	29.94847	0.7510
9	26.39573	0.8793
10	47.07337	0.1024
11	41.60841	0.2397
12	42.78475	0.2028

Null hypothesis: No serial correlation at lag order h

Heteroscedasticity occurs when variance of the error term differs across values of an independent variable. The table shows the results of the White heteroscedasticity test on the residual of error correction model. The results of the joint test and individual components in Table 9 indicate acceptance of the null of the heteroscedasticity test that says that there is no heteroscedasticity in the residual of the error correction model. This means that variance of the error term in the estimated error correction model does not differ across the value of independent variables, indicating that the estimated coefficients in the error correction model were unbiased, efficient and consistent.

Table 9
Heteroskedasticity Test

Joint Test:					
Chi-Sq	df	Prob.			
319.7379	294	0.1447			
Individual Components:					
Dependent	R-Squared	F(14,38)	Prob.	Chi-Sq(14)	Prob.
res1*res1	0.262044	0.963828	0.5055	13.88833	0.4581
res2*res2	0.120844	0.373090	0.9749	6.404715	0.9552
res3*res3	0.274544	1.027203	0.4488	14.55083	0.4095
res4*res4	0.200281	0.679764	0.7789	10.61490	0.7160
res5*res5	0.474076	2.446699	0.0144	25.12603	0.0333
res6*res6	0.248188	0.896039	0.5695	13.15396	0.5144
res2*res1	0.376677	1.640257	0.1123	19.96389	0.1313
res3*res1	0.202156	0.687739	0.7716	10.71426	0.7083
res3*res2	0.209884	0.721014	0.7403	11.12385	0.6763
res4*res1	0.259082	0.949123	0.5191	13.73134	0.4699
res4*res2	0.116905	0.359321	0.9787	6.195985	0.9613
res4*res3	0.123022	0.380760	0.9725	6.520189	0.9516
res5*res1	0.267095	0.989178	0.4824	14.15606	0.4382
res5*res2	0.202974	0.691232	0.7684	10.75763	0.7050
res5*res3	0.206026	0.704321	0.7561	10.91936	0.6924
res5*res4	0.321246	1.284638	0.2613	17.02604	0.2548
res6*res1	0.291308	1.115707	0.3762	15.43932	0.3488
res6*res2	0.607121	4.194419	0.0002	32.17741	0.0038
res6*res3	0.377430	1.645524	0.1109	20.00381	0.1300
res6*res4	0.290044	1.108890	0.3815	15.37234	0.3532
res6*res5	0.228654	0.804608	0.6590	12.11864	0.5968

CONCLUSION

This study empirically examined the impact of FDI on stock market development in GCC countries from 2002 to 2015. Using panel analysis techniques including the panel unit-root test, Johansen panel co-integration test and panel error-correction model, we provided evidence that FDI has statistically significant positive effect on stock market development in the long run, meaning that FDI has contributed in a substantial role in developing the stock markets in the long term in GCC countries. This result is consistent with the new tendency of GCC governments to encourage FDI and increase its role in developing the economy. On the other hand, this result is also consistent with many empirical studies such as Shahbaz et al. (2013) and Adam and Tweneboah (2009). The results showed that in the short term, FDI has a positive effect on stock market development but this impact is not statistically significant. These results have important implications that policymakers in GCC countries can take note of. The results indicate that policymakers in these countries should liberalise the hydrocarbon sector and integrate it to their economies to benefit from the inflows of FDI to this sector and help in further developing their stock markets.

This research confirms that both the economic growth and domestic credit to the private sector have a positively significant effect in the long term on stock market development but a significant effect only on short-term economic growth. These results suggest that GCC countries must adopt new policies to strengthen the relationship between domestic investors and the stock market by improving the laws, regulations and supervision of stock markets. Domestic institutional investors also must be promoted to develop the stock markets in the GCC countries.

On the other hand, the research results show that openness and economic size have a negative long-term impact on stock market development. This result is consistent with the tendency of big economies in the GCC to support and encourage medium- and small-sized enterprises (SMEs), resulting in increase to the GDP. However, investment in SMEs is not reflected in the stock market.

These results have two important policy implications. The first is that policymakers in GCC countries must be selective in attracting FDI; they must attract FDI to non-oil sectors to achieve their objectives in diversifying their economies away from oil revenues. However, policymakers in GCC countries must liberalise the hydrocarbon sector and integrate it to their economies to benefit from the inflows of FDI to this sector. The second is that GCC countries have large domestic financial resources that must be directed to finance medium- and small-sized enterprises (SMEs).

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