

Analyzing The Link between Financial Development and Foreign Direct Investment among D-8 Group of Countries

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Abstract

The purpose of this paper is to investigate whether foreign direct investment (FDI) can stimulate financial development or not. Financial markets have not been expanded in many developing countries despite their proven positive effect on economic growth. Although the impact of financial markets and FDI on economic growth has been investigated in three voluminous and parallel lines of studies, no research has examined the combined effect of foreign investment on financial development up to now. This study investigates the causal links between FDI and financial development using annual data for a panel of eight developing countries and vector autoregressive (VAR) model for 8 countries of D-8 group, during the period of 1976-2005.

Keywords: Foreign direct investment, Financial development, Countries of D-8, Panel data

JEL classification: G G₁ G₁₉

1. Introduction

Most developing countries are encountered with the problem of lack of investment resources in order to prosper the economic situation, produce job opportunities and have access to sustainable economic growth and development. Foreign investment plays a very important role in supplying investment resources in modern conditions of the global economy. The time for confronting with foreign investment has been expired and most discussions are mainly focused on the fact that which type of investment is useful for the country and how we can attract foreign capitals to the country. Nowadays, many countries tend to attract foreign capitals due to insufficiency of the internal resources. Foreign investment is typically done in two forms of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI).

Purchasing bonds and shares of companies in stock transactions and deposited bills in foreign banks are different kinds of FPI in which the foreign investor plays no direct role in management of the productive unit and has no fiscal responsibility. But FDI is a kind of investment that is carried out to achieve permanent and sustainable benefit in an organization in another country and the result is acquisition of effective voting right in the company's management. According to recent studies, the main reasons for high volume of FDI's entry in to the countries could be as follows:

- 1) Economic policy-making factors (such as economic stability, amount of investment risk, and etc.)
- 2) Economic structural factors (such as infrastructures like roads, ports, communication systems, and etc.)
- 3) Persuasive and supportive factors (such as tax exemption, giving subsidies, and etc.) (Ghaedi and Mussavi, 2007)

Many studies have investigated separately the effect of FDI on economic growth and effect of financial development on economic growth. However, researchers have not paid due attention to the relation between FDI and financial development.

-La Porta et al. (2000) and Glaeser, La Porta et al. (2004) stress that the development of financial markets need some outside stimulus from courts, government agencies, or other market participants. They point out that the integration of world capital markets makes financial markets' reforms more likely. Rajan and Zingales (2003) also emphasize that the only force that can ultimately make the financial elites adopt more market friendly policies is the inflow of foreign goods and capital. Morck et al. (2005), in their comprehensive survey of the literature, indicate that foreign direct investment is correlated with financial development, social and political modernization, and lower barriers to entry for new domestic entrepreneurs.

- Levine and Zervance (1998) in their study titled "Stock markets, bonds and economic growth" that was published in American Economic Review journal' tried to respond to this question that whether development of stock markets and banking improvement and progress lead to economic growth in long term or not. Also, they showed that simultaneous liquidity of stock markets and banking development have positive effects on economic growth, capital accumulation and improvement of productivity. They believe that these are controllable economic and political factors. In order to proving their theory, they investigate the impact of importance of various services of financial markets and impact of different banking services that are presented on the stock market on economic growth. This paper also concluded that variables such as size of stock market and global integration have no significant relation with economic growth. Also, this conclusion is obtained from the article that there is a relation among stock market variables and banking development and economic growth variables in long-term. Furthermore, liquidity of the stock market and banking development has a strong and positive relation with financial development and economic growth. These two factors are the main components of financial development for the economic growth process.

-Glaeser (2000) has done studies in some Asian countries and Lang (2002) has performed researches in European countries that confirm negative effects of owners of financial power on financial development. Also La Porta (2000) demonstrates that development of financial markets needs external stimulants from judiciary authorities, governmental agencies and other factors of the market. They point out that the integration of world capital markets leads to modification of financial markets.

-Jalayi and Sabbaghpur Fard (2010) in their study titled "studying effect of FDI on Iran's economic growth through path of financial markets" have concluded that FDI has significant and stable effect on economic growth. Therefore, development of financial markets gives rise to enhancement and stability of FDI's effect on economic growth in Iran.

-Fatemi and Vafai (2009) in their study titled "Role of foreign investment in the capital market and economic growth" have investigated the effect of positive benefits of foreign investment on economic growth in the capital market. They have concluded that one of the ways for developing capital market is to use the ability of foreign investment in the portfolio. In case of correct planning and performance, it is possible to attain economic development and growth.

Undoubtedly, achieving long-term and continual economic growth in developing countries is possible with optimum allocation and mobilization of investment resources in national economies of such countries. To achieve this goal, extensive and deep financial markets and especially developed financial markets are essential. One way for developing financial markets is to use the capability of foreign investment in the portfolio so that economic growth and development would be possible with correct planning and performance. With regard to this fact, this paper investigates the link between FDI and financial markets development. Existence of causal link between financial development indicators (liquid liability, bank credits and private sector' credits) and FDI in eight elected developing countries including D-8 countries during the period of 1976-2005 will be examined in order to gain this objective. So, the hypothesis of this essay is: There is a causal link between FDI and financial development of D-8 countries group. This article consists of five sections. Section 2 focuses on literature and background of study; section 3 reviews the econometric framework; section 4 includes data, estimations and test of hypotheses and their results; and section 5 deals with the conclusion and offers suggestions.

2. Literature and background of study:

2.1 Foreign investment and its kinds

Investments, which are performed in countries other than their main country (homeland) and are towards the framework of the government's objectives, are called foreign investment. In general, foreign investment is classified into two kinds direct and indirect kinds (Berkli, 2000 and Tayyebi & Azarbijani, 2009).

Foreign direct investment (FDI): There are different definitions for foreign direct investment, but United Nations Conference on Trade and Development (UNCTAD) presents the most general definition. Based on this definition, foreign direct investment (FDI) is the capital that guarantees long term relations and reflects the control and continuous benefit of a real or juridical personality domiciled in a country in a company out of the investor's country. In this type of investment, the investor purchases production unit's shares and becomes a partner in its ownership and he could be the owner of his share for unlimited time. Also the investor is permitted to sell and offer productive services at home and abroad (Komijani, Abbasi, 2007).

Another common definition of foreign direct investment that has been represented by International monetary fund is that " foreign direct investment is a kind of investment that is done with the purpose of gaining stable resources in a country other than the investor's homeland and the investor's purpose from such investment is to have an effective role in management of the related firm".

Foreign Portfolio Investment (FPI): In this kind of investment, only signed contracts between the two parties (foreign investor and the domestic party) determine framework and details of investment and partner's relations regardless of what is defined in all sections in the framework of civil participation methods, construction, exploitation, and submission that return of capital and obtained benefits are just gained from economic performance of the invested project and does not rely on the government' guarantee, banks or governmental companies (Tayyebi & Azarbijani, 2009).

2.2 Effective factors on FDI's attraction

Generally, the most important factors on attracting FDI could be divided into three categories based on the proposed theories in the realm of foreign direct investment (Ahmadi Hadid, Behruz, 2008):

1-Economic factors

2- Persuasive and supportive factors

3-Structural and institutional factors

Each of the above factors could be divided into several parts. All these factors participate in attracting FDI and it is not feasible to focus only on one of the above factors and ignore other aspects. Therefore, a country should perform appropriate policy-making in all three items in order to attract FDI. However, it is not possible to consider all these factors effective with a same ratio in attracting FDI. The importance degree of these factors is changed according to foreign investor's purpose for investing and purpose of the host country for accepting the foreign capitals. In the following, each of the above factors is investigated and manner of their effects on FDI will be analyzed. (Kalantari, 2004)

2.2.1 Economic factors

Economic considerations are the most important factors that determine FDI's entrance place. These factors could be divided into three groups:

Cases related to accessibility of resources or available properties in the host country.

Cases related to the size of goods and service markets.

Benefits related to product costs in the host country.

Although most factors that attract investment in certain places such as abundant natural resources, existence of a large consumption market in the host country (high demands), and flexible labor forces with low wages are very important, their relative importance is changeable.

2.2.2 Supporting and encouraging factors

In addition to economic, financial, and technical motivations, FDI is followed supporting factors too. In one hand, These factors are related to insurance laws, creating free and special economic zones and conditions of the government's supports domestic and foreign capitals and on the other hand, they are related to efficiency of capital markets and as a result efficiency of the economic system. The Government should ensure that it repays foreign companies and firms' loss in case of forced confiscation by paying fair compensations and besides it foreign investors must enjoy the necessary financial and safety security. Government's supports from domestic and foreign investors are another effective factor on FDI. Recent studies by IFC have shown that supporting private investment (domestic and foreign) not only decreases government costs in long-term, but also improves the government budget deficit.

2.2.3 Structural and institutional factors (Economic security)

Although economic and supporting factors play an important role in attracting external resources in every country's economy and show the profitable rate of the project and its attractiveness for investors, all these factors must be settled in a stable and secure environment that guarantees investment's future so that investors feel secure about the project's future and its benefits. A country which is involved in political and social unrest threatening investors' wealth will not be successful in attracting external resources even though be attractive economically. In fact, foreign investment is formed in an environment in which its required space exists. This environment includes variables such as political stability, legislation institutions stability, laws stability, social stability, bureaucracy quality, and corruption in the administrative system, confiscation and seizure of foreigner's properties and intellectual ownership right. Uncertainty and transaction costs, political, economical and legal risks are the determining factors for attracting FDI. Aspects of uncertainty and the market risk imperfections; transaction costs and incomplete information are referred almost in all existing theories about FDI that have been represented after 1960's. Political stability level, corruption in administrative system, bureaucratic quality, and quality of the legal system have considerable effect on the investment environment. Puiresson (1998) and Fobrisius (1998) have introduced all of these factors as economic security that shows the overall condition of institutional indexes in each country. Fobrisius defines economic security as "The institutional framework that inspires sense of trust to investors and savers and ensures physical security of individuals and legal security of transactions". The word "security" springs to the mind with meanings like peace, stability, order, rule of law and feeling confidence about future and requires removing barriers placed against it.

In terms of various dimensions of concept of security we can consider the most important and known meaning it that is omission of illegal coercion through legal encountering with such actions. Social security and economic security are concepts, which have been highlighted along with industrial societies. From one side these concepts mean accepted stability of social and economic order by the country and from the other side they mean to safeguard citizens' income and private property and protecting them against the effects of unemployment, illness, disability, changes of law, illegal groups and etc.

What seems certain is the close relation of economic security with meanings like freedom, equality against law, equality of opportunities, prosperity, economic growth, justice in transaction, and justice in distribution. Freedom concept is usually dividable into political, economic, cultural and intellectual freedoms. What is proposed as economic freedoms includes numerous cases like work freedom, agencies freedom, business freedom, contracts freedom, freedom of markets, freedom of competition, freedom to enter into any field of industry, freedom of occupation and freedom of consumption. Negation of these freedoms negates economic security too, although there are limits for each of these freedoms.

According to mentioned factors, creating a safe and stable area can have a determinant role in attracting and using foreign investment along with granting required economic incentives to foreign investors (Ahmadi Hadid Behrooz, 2008).

Given the importance of supporting and encouraging factors and structural and institutional factors, this essay investigates the effect of these factors on FDI by blending them with each other. Security has been used under the title of administrative corruption in countries and structural elements have been applied under the title of financial markets development index. In the following These two subjects will be discussed.

2.3 Development of financial markets

Several measures have been proposed in the empirical literature for measuring financial development. To measure financial development we focus on three variables proposed by King and Levine (1993a), Levine and Zervos (1998) and Levine et al. (2000).

These variables are:

- (1) Liquid liability (LLY) is the ratio of liquid liability of financial system to GDP.
- (2) Bank Credit (BANKCR) is equal to the ratio of domestic credit provided by the banking sector to GDP.
- (3) Private Sector Credit (PC) is equal to the ratio of domestic credit provided by financial intermediaries to GDP.

Liquid liability: Money and quasi money (M2) divided by GDP. Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. (WDI, 2008)

Bank credit: Domestic credit provided by banking sector divided by GDP. Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government,

which is net. The banking sector includes monetary authorities and deposit money banks, as well as other banking institutions where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other banking institutions are savings and mortgage loan institutions and building and loan associations. (WDI, 2008)

Private credit: Domestic credit to private sector divided by GDP. Domestic credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, which establish a claim for repayment.

For some countries these claims include credit to public enterprises. (WDI, 2008)

2.4 Benefits from foreign investment

In a general glance, effects of foreign investment could be evaluated from many aspects that some of them are mentioned below (Abzari, Mahdavinia, 2006).

-Industrial Structure and Performance:

Some studies have shown that foreign investments give rise to substitution of efficient producers for inefficient ones especially through international companies. Empirical evidences suggest that in countries where there are no specific barriers against trading and investment and the economic environment is favorable for private sector activities (both internal and external), international companies have positive effects on allocation of resources. Moreover, foreign investment can create capital and guide it towards active and productive units, increase production and control inflation.

-Growth of employment and human capital: Foreign investments have various effects on employment and human capital development and this issue clarifies the necessity of more exact studies the proposed plans of these companies by the government and enacts the rules for employees' employment by international companies and labor education programs. Studies show that if unemployment in a developing country has mainly structural causes, foreign investments will be ended in increasing employment. On the other hand, if foreign investment replaces with domestic investment, its employment effect would be insignificant or even negative. Experimental evidences reveal that international companies have more tendencies towards capital-intensive technologies than domestic companies. On the other hand, international companies can influence employment indirectly through links they have with upper or lower industries and through positive or negative effects on employment rate of competitors (Abzari, Teimouri, 2009).

-Increasing the liquidity of local capital markets: Foreign investment increases liquidity of local capital markets and also can help to improve the market's efficiency. Foreign investment helps to increase market efficiency in two direct and indirect ways. Additional money enters into the capital market with the presence of foreign investors and consequently trade volume and liquidity power of the market are increased. On the other side, attraction of capital market is enhanced with active and permanent presence of foreign investors. As a result, motivation and tendency of domestic investors for investing in the capital market are enhanced. So, this phenomenon leads to increase the market's liquidity indirectly.

-Connection of national economy with international economy: One of the important effects of international corporations on host countries is creating link and relation between these countries and international economy. These relations have generally positive effects in most cases and are established through foreign investment, and trade and technology transmission. Operations of international companies could be effective in increasing efficiency and decreasing production costs. Thus it will improve competitive position of a country in international markets (Abzari, Tymuri, 2009).

-Balance of payments and capital formations: Evidences indicate that foreign investments have little positive effect on payments' balance and capital formation at the time of investment. But this form of capital formation could be more effective by passing time through benefits' share, accumulated benefits and return of capital. From governments' viewpoint, the control that international corporations exert on their own capitals makes it possible in most cases to affect domestic policies of those countries and this subject is one of the reasons of disagreement with such investments. However, it is claimed that entered into the economy by international companies are not limited to capital. If importance of factors such as technology, management of access to markets and access to export are not more than the importance of capital, it wouldn't be less than that.

-Access to export markets: Despite present and future difficulties of export markets, the necessity of developing countries to develop export still remains. Using foreign investment is one of the tools to achieve this goal. International companies can bring the essential technology in order to manufacturing products with export quality and ensuring factors like on-time delivery, favorable and reliable quality that are essential for export marketing, and

finally information related to export markets and access to them with themselves to the host country (Abzari, Tymuri, 2009).

3. Econometric Framework

Consider the following multivariate autoregressive process:

Where: y_t = an (n.1) vector containing each of the n variables included in the VAR,

γ_0 = an (n.1) vector of intercept terms, γ_k = (n.n) matrices of coefficients, e_t = an (n.1) vector of white noise error terms, and p is the lag length.

If the variables in the model contain unit roots, Error Correction Model (ECM) is used to examine the long-run or co-integrating relationships between the time series as well as the existence and the direction of causality between the variables.

Formally, the (n.yt) vector $y_t = (y_{1t}, y_{2t}, \dots, y_{nt})$ has an error correction representation if it can be expressed in the form:

$$\Delta y_t = \gamma_0 + \gamma_{yt-1} + \gamma_1 \Delta y_{t-1} + \gamma_2 \Delta y_{t-2} + \dots + \gamma_p \Delta y_{t-p} + e_t$$

Where g is a matrix with elements γ_{jk} such that one or more of the γ_{yt-1} are not equal to zero, and γ_{yt-1} is the error correction representation of variables in y_t :

$$\gamma_{yt-1} = \Delta y_t - \gamma_0 - \sum_{i=1}^p \gamma_i \Delta y_{t-i} - e_t$$

The first step in estimating the ECM is to detect the co-integration among the time series. Co-integration necessitates that the variables to be integrated of the same order.

The augmented Dickey and Fuller (1979) test is commonly applied to find the order of integration, and Johansen (1988) likelihood ratio or a "trace" test is the common procedure to detect the co-integration vectors among the time series. (5)

3.1 Methodology

This study is a descriptive research in which annual panel of eight developing countries of D-8 group in the period of 1976-2005 by using Grenger causality test has been used to explore the causality links between FDI and financial markets. Also, the generalized Dickey-Fuller test has been applied to detect existence of the unit root for stationary test. The main criterion for choosing these countries is the existence of required data during the intended period. Eviews software has been used to examine these tests.

As already mentioned, the present study investigates the causality link between FDI and financial development in member countries of D-8 group in order to recognize mutual impacts of financial development and FDI and for their causality by means of VAR model and Granger causality test in the framework of VAR model along with variables of financial development and FDI indicators.

Amounts of FDI in this study are the ratio of net inflow of investment to GDP. As mentioned, there are different criteria to evaluate financial development that LLY, BCR and PC variables are considered in this study. GDP per capita has been applied because of existence possibility of specific economic conditions of a country and in order to control such conditions. Data related to FDI, GDP and all variables of financial development are transformed to natural logarithm.

3.2 Experimental Findings

In general, Granger causality method is the most common method to study causality link. However, this point should be considered that in applying Granger causality model, all used variables must be stationary. Otherwise, the non-stationary variables should be changed to stationary ones before estimating the model. Since most time series' variables of macroeconomic are non-stationary and have a random trend, we first study non-stationary condition of variables.

After performing unit root test and determining the degree of non-stationary variables, VAR model is used in order to recognize mutual impacts of financial development and FDI and also their causality by means of stationary variables. However, it is necessary to be assure of non-existence of long-term relationship between the variables through Johansson likelihood test before using VAR model given that using first-order difference of variables could be led to loosing their long-term data. It's because that the condition for using VAR test is non-existence of co-integration vector among variables. In other words, in case of existence of co-integration vector, applying this model is incorrect due to non-consideration of long-term information and ECM Model must be used instead.

This test is usually used to detect co-integration in restricted samples.

Table (II) presents the results of “Trace” circumstantial evidence that is used for testing series' co-integration. Co-integration test is usually sensitive to lag length. So, the optimum lag length recommended by Schwarz criterion is selected. According to the calculated values in section 1 of table (2), when financial development is measured by Private Credit (PC), the null hypothesis about non-existence of co-integration among FDI, PC and GDP for countries such as Iran, Pakistan, Egypt and Turkey is rejected.

In section 2 of table (II), BCR has been considered as financial development indicator. Data related to time series of BCR, FDI and GDP have co-integration in countries of Iran, Pakistan, Bangladesh, Indonesia and Egypt and null hypothesis is rejected. Also, results related to the above test are illustrated in section 3 of this table when LLY is considered as financial development index. According to these results, the null hypothesis is rejected among LLY, FDI and GDP in data related to Iran, Pakistan, Nigeria and Egypt.

We can test causality links between FDI and financial development by examining existence or non-existence of series' co-integration. Causality test has been performed by using the Error Correction Model (ECM) for countries that no evidences about existence of co-integration are found according to the above co-integration test. And for countries that existence of co-integration between FDI and financial development has not been proved, causality test is done using the first-order difference and VAR model. Granger causality test has been used for this purpose.

Table (III) presents the results of Granger causality test. In column (1), PC is considered as a dependent variable. Wald circumstantial evidence in this test suggests that FDI in Iran and Pakistan affects PC. In column (2) causality link has been studied from FDI to BCR. According to the above results, there is causality link from FDI to BCR in Turkey, Bangladesh and Nigeria. Column (3) contains the results of this test when LLY is considered as financial development index and dependent variable. There is causality link from FDI to LLY in Nigeria, Pakistan and Turkey based on obtained results.

Generally, FDI in Iran, Turkey, Pakistan, Nigeria and Bangladesh affects at least one of the financial development indexes according to the above results.

Causality links between FDI and financial development in inverse direction, i.e. Granger causality test from financial development to FDI are considered in some studies. Because of this, impact of financial development indexes on FDI has been examined and its results are illustrated in table (IV). With due attention to these results, this link has not been obtained in none of the above series and these indexes do not affect FDI in studied countries.

4. Conclusion and Recommendations

In this study, existence of causality link from FDI to financial markets has been approved at significance level of %5 in five countries. According to the intended corruption index, high level of corruption exists in these countries. Glaeser et al. (2004) argue that although institutions are constructed through the social and political history of a country, they develop as the society develops. They provide evidence that even countries suffering from political dictatorship have an increasing chance to improve their institutions and by accumulating human and physical capital and becoming richer, they will be no longer poor. Our findings support this view. Obtained results suggest that inflow of foreign investment, which makes countries richer, may be considered another factor, which can improve financial institutions and financial corruptions.

Despite this fact, financial markets have not developed in many developing countries.

A growing part of the recent literature argues that one of the crucial obstacles against financial development is the lack of incentive by corrupt financial and political elites. The well capitalized dominant elites and domestic monopolies consider financial markets a threat to their power and curb opportunities to new investors.

Glaeser et al. (2004) point out that democratization and constraint on government are not the necessary condition for institutional and economic development. They argue that institutional development in China and many other poor countries in East Asia indicates that proper policies can be chosen even under political dictatorship. Their evidence supports the viewpoints of Lipset (1960), Barro (1999), and Przeworski (2004a, 2004b), that countries which became richer by accumulating human and physical capital under dictatorships, were consequently able to improve their institutions.

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Table I. ADF unit root tests

Country	GDP		LLY		BCR		PC		FDI	
	First.dif	level	First.dif	level	First.dif	level	First.dif	level	First.dif	level
Iran	-4.01*	-1.59	-4.76*	-1.74	-5.44*	-2.62	-7.95*	-3.38	-6.62*	-2.56
Turkey	-5.49	-2.14	-6.34*	-2.72	-5.01*	-0.90	-3.92*	-3.63	-7.09*	-3.41
Pakistan	-4.14*	-3.01	-4.75*	-1.93	-3.89*	-2.30	-5.18*	-2.40	-5.43*	-3.09
Bangladesh	-4.05*	-2.92	-5.31*	-2.27	-4.32*	-1.15	-3.94*	-2.62	-4.05*	-2.37
Indonesia	-5.38*	-2.91	-0.6	-2.35	-3.46*	-1.24	-8.12*	-5.00	-6.56*	-2.43
Malaysia	-3.90*	-2.95	-5.52*	-2.72	-4.73*	-2.51	-7.35*	-2.82	-6.11*	-1.93
Egypt	-8.80*	-4.94*	-6.18*	-1.82	-	-4.65*	-4.73*	-5.45*	-4.96*	-3.39
Nigeria	-4.41*	-0.035	-5.92*	-2.26	-4.57*	-1.59	-5.61*	-2.24	-	-5.02*

The augmented Dickey-Fuller statistics for the hypothesis of unit roots in levels and first difference

* shows rejection of unit root test at 5 percent level of significance

Table II. Johansen co-integration tests

country	Co-integration test	Co-integration test Variables:	Co-integration test
	Variables: PC,GDP,FDI Trace statistics section 1	BCR,GDP,FD Trace statistics section 2	Variables: LLY,GDP,FDI Trace statistics section 3
Iran	82.92*	44.42*	52.22*
Turkey	43.30*	29.31	28.44
Pakistan	45.39*	50.11*	48.60*
Bangladesh	36.51	51.05*	37.67
Indonesia	33.64	44.94*	33.84
Malaysia	34.01	39.73	35.26
Egypt	43.24*	46.32*	32.67*
Nigeria	37.96	37.33	56.07*

Notes: * Denotes rejection of the null hypothesis of no co-integration at 5 percent level of significance

Table III. Causality tests

country	(3) LLY		(2) BCR		(1) PC	
	Dependent Variables		Dependent Variables		Dependent Variable	
	GDP	FDI	GDP	FDI	GDP	FDI
Iran	2.60	0.29	2.10	1.37	34.28*	33.73*
Turkey	16.74*	7.49*	14.09*	13.50*	0.18	2.62
Pakistan	0.08	17.02*	2.90	0.01	4.40	8.43*
Bangladesh	1.83	1.25	7.58	7.10*	3.28	4.82
Indonesia	1.78	3.62	0.014	2.21	0.69	0.623
Malaysia	5.56	0.50	1.95	0.91	3.67	1.40
Egypt	0.015	0.36	1.22	0.33	5.01	0.35
Nigeria	0.25	6.64*	5.01	10.76*	6.54*	3.23

*denotes the statistical significance at 5 percent level of significance

Reverse causality: the results of causality tests from financial development to FDI

Table IV. Causality tests independent

country	FDI: Dependent Variables		FDI: Dependent Variables		FDI: Dependent Variables	
	PC	GDP	BCR	GDP	GDP	LLY
Iran	0.92	0.097	4.29	0.29	0.04	2.13
Turkey	0.50	0.10	3.53	3.63	1.24	5.46
Pakistan	1.46	0.003	0.04	0.50	0.41	0.33
Bangladesh	1.74	0.41	0.46	0.72	0.08	1.18
Indonesia	0.59	3.81	0.44	2.82	2.19	2.38
Malaysia	0.07	0.19	0.41	0.13	1.17	1.96
Egypt	1.43	0.37	1.67	2.39	1.57	1.58
Nigeria	1.50	1.85	0.64	0.92	1.49	2.76

*denotes the statistical significance at 5 percent level of significance