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Does foreign direct investment influence development of stock market of host country? Evidence from Pakistan

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Foreign direct investment (FDI) is a mechanism of international flow of capital. It is not merely a conduit for transfer of money to an investment destination where it generates higher returns but also a channel for transfer of best practices including improved and innovative technologies, technical know-how, management methods, labor skills and other innovative practices of conducting business operations. This happens because of the ownership stake of the investing organization in its affiliate firm which gives investors some extent of authority in the management of its affiliate. Extensive amount of literature dealt with factors determining FDI flow into an economy and how it influences economic growth. Owing to conflicting evidence by various researchers the topic is still controversial. It started attracting more attention since capital control liberalizing policies by developing countries increased their growth in recent past. Relatively fewer studies deal with the issue of how FDI creates an influence on a country's stock market, and no such study has been conducted in Pakistan. It is important to study how stock markets respond to FDI because stock markets give an estimate of investors' trust and economic activity. This study examined this particular relationship by analyzing data using cointegration and Granger causality techniques.

Key words: Foreign direct investment, stock market, cointegration, granger causality.

INTRODUCTION

Flow of capital across national borders has been a favorite subject of investigation by researchers in fields of international business, finance and development economics for many years. In past, many countries particularly the developing economies preferred to be somewhat isolated when it came to capital flows among nations, being cynical of different modes of international capital flows. That was the time when benefits of this international financial integration were not believed by many governments (Wei and Balasubramanyam, 2004). Although, regional governments might have been cynical

in their attitude towards the benefits of international flow of capital but this subject has always received great favor from expert economists and specialists of this field. The reason is the vast range of advantages caused by this flow practice. An important benefit of this phenomenon is investment of money in a country where it generates higher returns. A free flow of capital without any unnecessary restrictions paves the way for internationalization or integration of global financial markets. International capital flows can occur through a number of diverse ways, FDI being one of them.

FDI is a major contributor to the phenomenon of globalization and international financial market integration being witnessed since the past few decades. The term foreign direct investment is used to describe a lasting relationship between two enterprises, when the two are residents of different economies. In this process one of the participating enterprises gains some sort of control in the other enterprise's management by holding equity

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Abbreviations: MCAP, Market capitalization as percentage of; GDP, gross domestic product, NFDI, net foreign direct investment inflow; EXRT, nominal exchange rate

investment in it (UNCTAD, 1999). FDI flows have increased globally in the last few decades because of liberalization of capital account, financial openness, and unrestrictive trade policies adopted by many countries. The benefits of FDI for the host economy not only include transfer of capital but also involve transfer of new and advanced technologies, improved labor skills, innovative and proven success creating management practices, and many other practices that will eventually contribute to growth of the destination firms as well as of the entire recipient country (Razin and Sadka, 2007). This occurs mostly when FDI flows from the industrialized to developing economies, because companies in industrialized economies are advanced in their research and development and have already adopted industry best practices in their operations. When these firms invest in, and acquire managerial control of entities in other economies than their own, they transfer these best practices along with the investment capital.

A significant implication of bringing new techniques through FDI into host economies is that it urges local firms to develop and adopt these new techniques and skills to increase their competitiveness compared to FDI enterprises. Therefore we can say that examining the influence FDI on the economy of recipient country is important due to its direct positive effect and also due to “externality” or “spillover effects” that contribute to economic growth. A lot of evidence also suggests that FDI can adversely affect host economy but its benefits are still considered relatively more important by many researchers (Bonaglia and Goldstein, 2006). Evidence about its impact on host country is greatly contradictory and the topic is still considered controversial.

Stock markets are considered to be significant indicators of the economic activity. A stock market not only provides a platform for the listed companies to raise larger amounts of capital but it represents trust that the investors put in that market and in that country's economic stability of the country which it belongs to. This is why political and other upheavals can adversely affect the level of activity in a stock market.

This research examines FDI with respect to its influence on development of stock market. Literature related to this particular topic is relatively limited with some studies examining how liberalization influences economic growth in general and some studies regarding the relationship of financial liberalization with stock markets in particular. But relationship of FDI with the development of stock market in Pakistan has not been analyzed till now. This research will attempt to fill this gap by examining this relationship in Pakistan using time series data for a time period of 1998 to 2009. Previous studies have claimed that the two are positively correlated and some suggest that the relationship between these two is of bidirectional causal nature because both have been found to affect each other in different studies

(Al Nasser and Gomez, 2009; Garcia and Liu, 1999). Cointegration technique was applied to check for long term relationship among variables and Granger test was done to determine causality.

LITERATURE REVIEW

What is foreign direct investment (FDI)?

According to the IMF's BoP Manual, FDI is the term used to represent the process of making a long term investment in an enterprise which operates in any other economy than that of the enterprise which is making this investment. In this action, intention of the investing firm is not just to get higher returns but also to gain some extent of managerial authority and control or “an effective voice in the management” of enterprise in which this investment will be made (balance of payments manual, 1993).

First main component of FDI definition is that the two entities involved in this process must be residents of different countries. The enterprise making the investment is termed “parent enterprise or foreign direct investor” (UNCTAD, 1999), and the country which it is a resident of, is called “home” or ‘source country’ (Moosa, 2002). The other entity is the recipient of this investment, that is, the firm which is invested in and the term used to describe it is “FDI enterprise, affiliate enterprise, or foreign affiliate” (UNCTAD, 1999). The country, to which this recipient enterprise belongs, is called host country (Moosa, 2002). This is the process through which “multinational enterprises (MNEs)” or “multinational corporations (MNCs)” are usually created. Some researchers have used MNE and FDI synonymously claiming them to be one and the same. But others claim that the two might be different, like Dunnign and Narula (1996), who argued that MNE's role is becoming broader than that of FDI.

Second main component in various definitions of FDI is the fact that through FDI the parent firm gains some kind of control over, or “an effective voice in management” of affiliate firm (Jones and Wren, 2006). This “effective voice” refers to owning at least 10% of equity interest in the affiliate firm which gives these equity owners voting rights thus giving them some control and authority in the process of managerial decision making (OECD, 1996). Although, this 10% ownership interest is an internationally accepted standard but different countries use different criteria for this purpose (Razin and Sadka, 2007).

The flows of FDI are of two types with respect to the country under consideration: ‘inflow’ means foreign direct investment into the host country while ‘outflow’ means FDI moving out of the host country. Subtracting outflow from inflow gives ‘net FDI inflow’ for the host country. FDI

should be differentiated from foreign portfolio investment (FPI) which is the term used to describe short term investment in shares and bonds in host country and most of the times this is speculative in nature (Sullivan and Steven, 2003). Another important distinctive feature of FPI is the lack of control of the affiliate firm, because of which it is often categorized as an indirect investment (Jones and Wren, 2006).

FDI – in relation to economic growth

Whether FDI promotes economic growth of host country or not is a subject of ongoing discussion. Research on the how it affects recipient economy's growth has produced extensive literature including many books but the evidence presented by these researchers is still contradictory. Because of the significant part played by the policies made by government of host economy in facilitating or hindering FDI flows, this is also considered as a topic of political nature. At one extreme it is claimed that FDI is vital for growth of host economy particularly in case of developing economies as has been evidenced by the phenomenal growth of Chinese economy following its liberalized trade policies promoting FDI (Zhang, 2004; UNCTAD, 2005). But at the other extreme, it has been called similar to colonialism because of the control that a parent enterprise might exert on the recipient enterprise which might in turn influence the host economy adversely. Regardless of whether it affects the host economy in a good manner or bad, FDI is still considered an effective method of increasing globalization leading to integration of international financial markets.

Numerous studies have been conducted on FDI till now, out of which some investigated its determinants and factors causing its inflow into host countries while others have tried to identify what influence it creates on host economy. Balasubramanyam et al. (1996) examined the relationship between FDI and economic growth in developing countries. They divided the selected countries into two categories based on the kind of trade policy regimes that they were following. One group included those countries which had implemented "export promoting (EP) policy" while the other group included countries following an "import substituting (IS) policy". EP strategy is considered more effective in generating greater amounts of FDI inflows as compared to the IS strategy (Bhagwati, 1985). The findings by Balasubramanyam et al. (1996) demonstrated FDI to have positive influence in enhancing growth. In addition they argued that in order to enjoy maximum advantages of FDI it must be complemented and facilitated by the trade policy of host country.

Borensztein et al. (1998) studied the influence of FDI on host country by analyzing twenty years FDI data of 69 developing countries which were receiving FDI inflows

from industrial countries. They implemented a 'cross country regression' framework in this analysis and found FDI to be relatively more important in causing growth as compared to domestic investment. They also claimed that full rewards of FDI can be received only if the host country has already developed the capability to adopt and utilize the new techniques being transferred through this process.

De Mello (1999) conducted a study by analyzing data from 32 countries over a period of twenty years to determine influence of FDI on growth. The influence of FDI in growth was marked for developing countries as compared to industrialized ones. In this study FDI was found to have positive impact on different aspects of growth and it was suggested that FDI and domestic investment should be considered as complements of each other rather than substitutes.

In the period of 1978 to 2005 China's average economic growth rate was a very impressive 9% which is attributable mostly to high inflow of FDI (Zhang, 2004). No other economy has shown such level of growth in response to FDI as demonstrated in Chinese economy (UNCTAD, 2005). China's great economic growth was followed by the radical steps taken by their government to promote FDI inflows. This success led to massive amounts of literature examining the impact of FDI in causing economic growth with particular reference to the example of China including many books which have been written on this topic (Yanrui, 2000). These studies not only highlight the importance of direct effects of FDI, including the transfer of labor and managerial skills, and recognition of established brand names to the host country, as well as its 'externality' or 'spillover' effects that might occur with the transfer of these new technologies, etc (Markusen and Venables, 1999; UNCTAD, 2005).

Wen (2002) empirically studied how FDI influenced growth and development in Chinese region and geographical differences among different regions of China magnified the effects of FDI, to utilize its full potential. He based his arguments on the regional differences in income in various regions of China which can be attributed to differing levels of FDI received by those regions. He found that eastern region of China was geographically more favorable to exports which led to attracting more FDI into this region and FDI in turn helped increase exports. Therefore he demonstrated that FDI and exports both are causing each other in eastern China thus contributing to its greater income level as compared to other regions.

In order to attract the right type and amount of FDI it is necessary that the recipient economy has a certain minimum level of development (Borensztein et al., 1998). This fact has also been evidenced by the difference in the good impact of FDI depending on the extent of development, institutional infrastructure and geographically feasible location of different regions of China (Wen, 2002).

Haskel et al. (2005) found that FDI had a positively correlation with increasing the productivity of firms in the host country because of its spillover effects in a study conducted in United Kingdom. Ozturk and Kalyoncu (2007) empirically examined how FDI relates to economic growth in a cross-country comparison of Pakistan and Turkey. Their findings suggested that FDI causes growth in Pakistan while the causal relationship is bidirectional in case of Turkey. Mun et al. (2008) also found FDI to have positive relationship with growth using time series data for Malaysia. Inward FDI has been found to increase competitiveness of affiliate enterprises by transfer of innovative technologies thus, making their operations better than those of the local firms (Scott-Kennel, 2004).

Although, a large number of studies suggest that FDI enhances development and growth of host country but there exists a lot of evidence that suggests otherwise. Many researchers have found that FDI plays no part in causing growth in the economy of recipient country. These contradictory findings by researchers regarding the role of FDI itself are a target of investigation. The main reasons of these contradictory findings have been attributed mainly to differences in methods of calculation of FDI by various countries and also to lack of a standardized methodology that can be adopted to analyze the relationship of economic growth of host country with the FDI (Moran et al., 2003).

Carkovic and Levine (2002) did an empirical cross country comparison and found that there is no positive effect of FDI on economic growth if a number of different factors are also considered in the study. They claim that good economic policies of host country are useful in causing growth which leads to more FDI but their findings did not support the notion that FDI causes growth and development of host country.

Durham (2004) analyzed data of two decades from eighty countries to examine how FDI impacts development and found no relationship of FDI with economic growth. Some of his findings suggested that FDI can create an influence on growth depending on the extent to which legal and financial institutions of host country have been developed but on the whole FDI was found to have no impact in causing development and in some cases it turned out to be hazardous for host economy (Durham, 2004).

FDI and stock market development

Many studies noted earlier suggest that FDI inflows in greater amounts can lead to growth in the recipient economy, and development of stock market is a part as well as a consequence of this growth which can also be used as a measure to represent this effect of FDI. Therefore, a study of how FDI influences the development of host country's stock market gives us an

idea of the effectiveness of FDI in causing growth. Numerous studies have been done to identify determinants of FDI and those of stock market development separately throughout the world as well as in Pakistan. Some suggest FDI to impact economic growth and stock market development while others also show stock market development to attract more FDI for the host country.

Chinn and Ito (2006) performed an empirical investigation to determine how capital account liberalization can increase the development of a country's financial markets. Their findings proved that financial liberalization and openness can contribute to development of financial markets but for this effect to take place there a minimum required level of development of legal institutions dealing specifically with financial institutions should be already in place in the destination country.

The number of studies which examine the relationship of FDI with stock market in particular is relatively limited. Garcia and Liu (1999) examined how various factors can contribute to the development of stock markets in different countries. Based on their findings they proposed that economic development plays an important part in this respect therefore economic and financial liberalization can lead to developing the equity market of a country.

Claessens et al. (2001) argued that financial reforms and macroeconomic stability help increase FDI and promote the development of stock markets. They found that a positive correlation exists between development of stock market and FDI and claimed that increase in FDI contributes to higher activity in the stock markets of host economies. They claimed FDI to be a "complement" of stock market rather being its "substitute". Al Nasser and Gomez (2009) conducted a study in Latin America and found similar results showing that FDI has a positive correlation with the development of stock market and that both are complements for each other not substitutes.

Adam and Tweneboah (2009) proposed that FDI can positively influence stock market by conducting an empirical investigation on the stock exchange of Ghana, and also proposed that FDI has a positive long-run relationship with development of stock market. Although, the relationship between stock market development and FDI has been analyzed by researchers with reference to different countries but it has not yet been examined in the environment of Pakistan until now and the current study tries to fill the very gap.

Hypotheses

This study focuses on establishing how net FDI relates to the development of stock market of host country. Previous literature has shown that FDI can cause development of stock market along with other macro-economic variables. Similarly stock market development

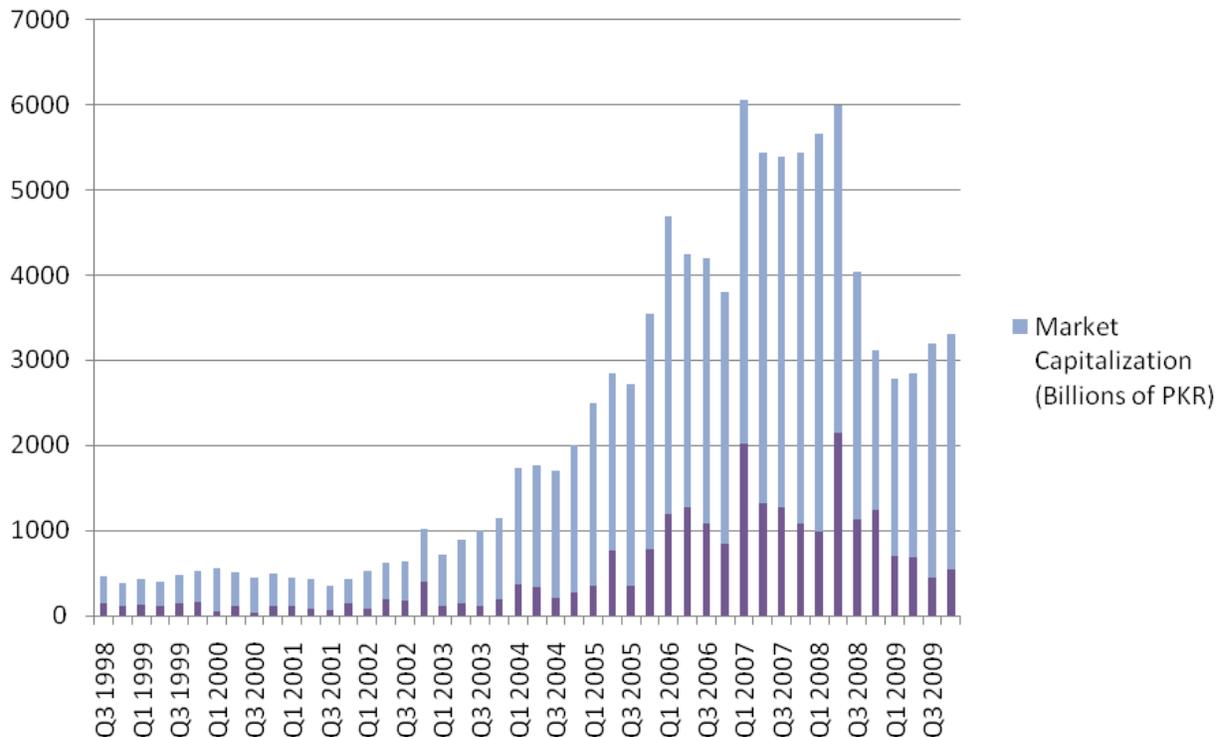


Figure 1. KSE Market capitalization during the period of study.

can also cause FDI to increase according to some researchers. Since macroeconomic stability is also a defining factor for both stock market development and FDI inflow, this study tried to determine how nominal exchange rate relates to other variables under study. The hypotheses developed and tested for this purpose included the following:

H₁: Net FDI inflow, nominal exchange rate and development of stock market have a long term cointegration relationship with each other.

H₂: Net FDI inflow causes development of stock market.

H_{2a}: Development of stock market causes Net FDI inflow.

H₃: Nominal exchange rate causes development of stock market.

H_{3a}: Development of stock market causes nominal exchange rate.

H₄: Net FDI inflow causes nominal exchange rate.

H_{4a}: Nominal exchange rate causes Net FDI inflow.

RESEARCH METHODOLOGY

Objectives

- 1) Does FDI influence development of stock market in recipient country?
- 2) If FDI does create any influence on development of stock market, what is the nature and extent of this influence?

Study period

The period of study was from quarter 3 of 1998 to quarter 4 of 2009 based on availability of data.

Variables

Following variables were selected:

- 1) Market capitalization as a percentage of GDP (MCAP)
- 2) Nominal exchange rate (EXRT)
- 3) Net FDI inflow (NFDI)

Market capitalization as a percentage (MCAP)

Market capitalization

Market capitalization refers to the product of outstanding shares in market and price per share. This gives an idea level of activity in that market.

Justification

In the current study market capitalization of Karachi Stock Exchange (KSE) has been used because KSE being the largest stock exchange in Pakistan, its activity level is an appropriate proxy for development of stock market in Pakistan. Figure 1 presents a graphical representation of how KSE market capitalization had changed over the years during our selected period, using quarterly market capitalization values.

This variable was calculated by dividing market capitalization by

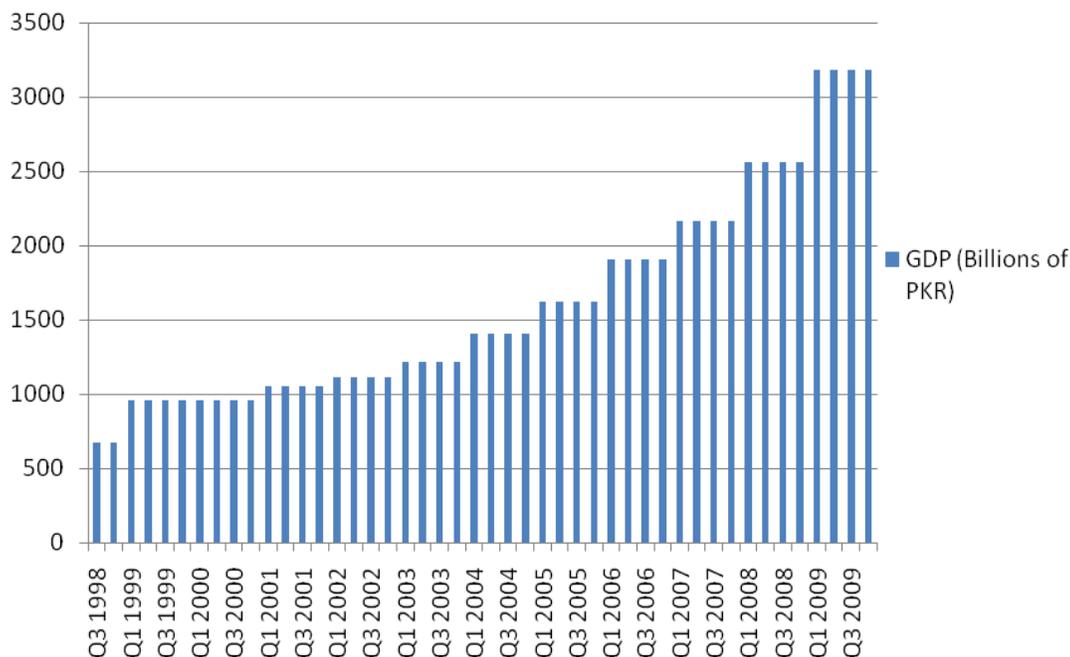


Figure 2. GDP of Pakistan (billions of PKR).

GDP. It gives a measure of how developed a certain stock market is. It was used in various previous studies (Levine and Zervos, 1996; Garcia and Liu, 1999; Claessens et al., 2001; Yartey, 2008; Adam and Tweneboah, 2009; Al Nasser and Gomez, 2009). This is an appropriate proxy of stock market development because it is considered to be more objective and less arbitrary as compared to other measures used for this purpose (Yartey, 2008).

Data collection

This study used quarterly data for market capitalization and GDP. The quarterly data for market capitalization of KSE was obtained from the website www.brecorder.com. This was measured in Pakistani rupees. GDP data measured in Pakistani rupees was obtained from the website of IMF in the database of International Financial Statistics (IFS) (Figure 2). This was annual data which was converted into quarterly figures following the method of constant factor cost as used by Akhtar and Malik, (2000). FDI data for Pakistan was collected from IFS provided on IMF website. In this database, the series named "Direct investment in reporting economy" represents inflow of FDI while the series named "Direct investment abroad" contains data of FDI outflow. Both values are taken in millions of US dollars. Net FDI was calculated from these values using the method described above. Given below is a representation of the changes occurring in net FDI inflow in the economy of Pakistan during the selected period.

EXRT

This study used nominal exchange rate as a measure of macroeconomic stability. The quarterly data for this purpose was acquired from IMF website. The series named market rate represents the exchange rate for the country and the unit was in rupees per US dollar.

Stock market development is enhanced by macroeconomic

stability as evidenced by previous studies (Claessens et al., 2001). But some studies have found opposite results regarding this relationship stating that in relation to the development of stock market, macroeconomic stability is not significant (Garcia and Liu, 1999). Studies of how exchange rate relates to FDI have also been conducted, demonstrating that decreased exchange rate attracts more FDI into host country and vice versa (Froot and Stein, 1991) (Figure 3).

NFDI

From the perspective of the country under consideration, usually called the reporting economy, FDI is of two types. The foreign direct investments being received by the reporting country is termed FDI inflow and the FDI which is being invested by residents of the reporting country into foreign countries is termed FDI outflow. Net FDI inflow is calculated by deducting outflows of FDI from the inflows with respect to the reporting economy which is Pakistan in this study. Net FDI inflow is the net amount of FDI entering reporting economy for certain period (Figure 4).

RESULTS

Data analysis

Data analysis was done with Microsoft Excel and Eviews.

Problems in analyzing time series data in econometrics

Certain prerequisites must be fulfilled before time series data are tested in econometric analysis to avoid

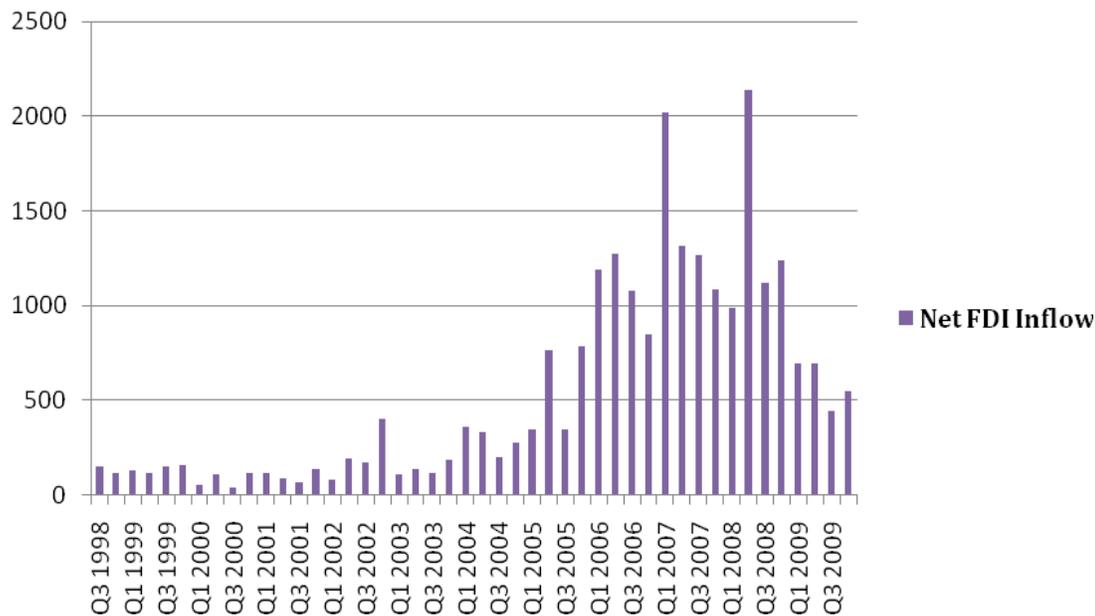


Figure 4. Net FDI inflow into Pakistan (millions of USD).

Table 1. ADF test results.

Variable	ADF statistic		Critical value		
	At level	1st difference	1%	5%	10%
MCAP	-1.48	-3.145	-3.585	-2.930	-2.602
EXRT	-0.773	-3.919	-3.585	-2.930	-2.602
NFDI	-1.116	-5.535	-3.585	-2.930	-2.602

ADF statistic value greater than critical value indicates that time series is stationary.

econometric problems which might lead to unreliable results (Wassell and Saunders, 2008). It is necessary to identify level at which it is integrated before it can be tested in econometric analysis and it must also be tested for unit root.

Testing for stationarity –ADF test for unit roots

Each variable series was tested by applying the ADF test. The labels used for these variables are as follows:

NFDI –represents net FDI inflow.

MCAP –represents market capitalization as a percentage of GDP.

EXRT –represents nominal exchange rate (Table 1).

Interpretation of ADF unit root test

MCAP

The results of ADF test show that MCAP is not stationary

at level because at this point, ADF statistic value of -1.48 is less than critical value of -3.585 at 1%. Then the test was repeated at first difference. ADF statistic value at first difference was -3.14 which were still less than -3.585 but this value was greater than critical value of -2.93 at 5%. Therefore, the study conclude that this variable has been found to be stationary at first difference and the series is integrated of order 1 that is, I (1).

EXRT

For EXRT, ADF statistic of -0.773 was lower than 1% critical value of -3.585, indicating that EXRT is not integrated of order zero. Then the ADF test was repeated for first difference, at which ADF test value of -3.919 which is greater than 1% critical value so EXRT is stationary. Therefore, we determine that EXRT is I (1).

NFDI

NFDI was analyzed in the same manner as the first two,

Table 2. Cointegration results.

Eigenvalue	Likelihood ratio	5% Critical VALUE	1 % critical value	Hypothesized no. of CE(s)
0.305574	20.41297	29.68	35.65	None
0.057605	4.367498	15.41	20.04	At most 1
0.039144	1.756965	3.76	6.65	At most 2

Since likelihood ratio statistic has never exceeded the critical values at both 5 and 1% levels, in the table given above, this indicates lack of long run equilibrium relationship.

Table 3. Results of pair wise Granger causality tests.

Null hypothesis	F-Statistic	Probability
DMCAP does not Granger Cause DEXRT	3.94785	0.02768
DEXRT does not Granger Cause DMCAP	2.74979	0.07668
DNFDI does not Granger Cause DEXRT	2.61473	0.08631
DEXRT does not Granger Cause DNFDI	0.07764	0.92544
DNFDI does not Granger Cause DMCAP	0.83477	0.44178
DMCAP does not Granger Cause DNFDI	2.00173	0.14910

In this test, probability value less than 0.05 means our null hypothesis is rejected.

being tested first at level where it had unit root because of ADF test statistic value of -1.116 being less than the critical value. After taking first difference this series also became stationary having ADF statistic value of -5.535 greater than 1% critical value. Therefore NFDI is also I (1).

Co integration

This methodology was proposed by Granger (1981) who suggested that even if time series have unit root in them and are found to be integrated after taking differences, they can still have long run equilibrium. This theory was later modified into a formal technique by Engle and Granger (1987) who proved that if variables have integration of the same order, they can be tested for the existence of an equilibrium relation (Dolado et al., 1999).

Since the variables are integrated of same order, I (1), therefore, the study performed an estimation of cointegration using these variables. Its results are given in Table 2.

Since likelihood ratio statistic has never exceeded the critical values at both 5 and 1% levels, in the cointegration results given in Table 2, this indicates lack of long run equilibrium relationship.

Testing for bidirectional causal relationship – Granger causality test

Next we tested our variables in groups to identify whether there exist bidirectional causal relationships between the

two variables of each group. For this purpose we use the Granger causality technique as available in Eviews. Granger causality test gives us an idea about whether one variable has an impact over the other and also indicates if one variable precedes the other in their movement, describing that movement in one variable occurs before any movement in the other. So when we say that one variable Granger causes the other, it means that first variable causes the second variable to move and also that the first variable moves before the second one (Table 3).

Conclusions

Based on results of afore-mentioned tests, the following conclusions were made:

Like most instances of time series, the data collected for our selected variables had unit root or trend at level, when they were tested by ADF unit root test. Then first differences of these variables were tested for stationarity and they showed lack of unit roots, indicating that the data had become stationary after taking first difference for each series. This meant that our data had become integrated of order one. When all data series became “integrated of same order”, we performed cointegration. Results of cointegration showed that data series were not cointegrated because likelihood statistics were lower than critical values at all levels. So it was concluded that net FDI inflow, market capitalization and nominal exchange rate do not have any long term equilibrium relationship with each other. This rejected our first hypothesis H1.

This means that in Pakistan, these variables do not move along with each other for a length of time but have tendency of moving away or drifting apart from one another.

After cointegration we moved on to testing other hypotheses. These hypotheses had been formulated to determine what influence each variable creates on every other, keeping in view the findings reported by previous researchers who studied these variables in different environments. This was done by performing Granger causality test. The results indicate that among the three groups of six variables tested for Granger causality, only market capitalization is found to Granger cause nominal exchange rate. This indicates that no other causal relationships exist among the variables under study with reference to Pakistan. Therefore, we conclude that with reference to the data analyzed for Pakistan market capitalization Granger causes nominal exchange rate but nominal exchange rate has not been found to Granger cause market development. This result has led to acceptance of our hypothesis H3a while the hypothesis H3 has been rejected owing to the lack of causation by exchange rate on development of stock market. It can be inferred following this discussion that a movement in stock market capitalization will be followed by and cause a movement in nominal exchange rate but stock market capitalization itself will not be influenced by exchange movements in any way.

The second Granger causality test analyzed causality between net FDI inflow and nominal exchange rate. In this case both null hypotheses have been accepted leading to rejection of our hypotheses H4 and H4a. Therefore we infer from these results that net FDI inflow and nominal exchange rate do no Granger cause each other. This led us to conclude that in Pakistan these variables lack causal relationship and they have not been found to be able to impact each other in any way.

Third Granger causality test was done to test whether net FDI inflow could influence stock market development of Pakistan. Again in this test, both null hypotheses were accepted depending on the probability value and our hypotheses H2 and H2a were rejected. From these results we conclude that in Pakistan net FDI inflow and development of stock market have no impact on each other and there is no evidence to believe that a movement in one of them might be followed by a movement in the other.

To sum up the results of our discussion, only one hypothesis labeled H3a has been accepted in our study while all others have been rejected.

The analysis findings showed that in the Pakistani environment net foreign direct investment inflow has neither a long term relation with nor does it cause development of stock market. Based on this finding we suggest that these two should be viewed as separate entities and not as related to each other during the process of policy making. These findings do not reject the

role of FDI in causing overall economic growth or undermine its importance, and they also do not mean that the development of stock market does not have importance in development of economy. However, they indicate that FDI should not be considered as a means to cause development of stock market in Pakistan and other policies should be drafted and steps should be taken regarding its development.

LIMITATIONS

A major limitation faced in the present study was limited availability of data because of which the period of study had to be limited otherwise it would have been preferable to do this research for a longer time period, which might have made the findings more reliable.

FUTURE DIRECTIONS

Based on limitations of current study described previously some suggestions for future research on this topic include the following:

- 1) Past data of market capitalization beyond the time period of this study should be obtained and the same relationships could be examined for a period spanning longer length of time.
- 2) To determine existence of causal relationship between net FDI inflow and development of stock market, similar studies can be conducted for other countries which can either support or oppose these findings, leading to a specific conclusion.
- 3) In order to get a better measure of development of stock market in Pakistan as a whole, all three stock markets can be considered while calculating market capitalization in a similar study.

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