COMPARATIVE STUDY OF THE ECONOMIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN PAKISTAN, INDIA AND INDONESIA

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ABSTRACT

In this study an attempt has been made to investigate the effects of economic factors on foreign direct investment (FDI) inflows into Pakistan, India and Indonesia. Simple log linear regression model for each country has been used and the method of least squares has been applied. Empirical results show that market size, domestic investment, trade openness, and physical infrastructure are the important economic determinants of FDI. Further, this study also found that the empirical results of the economic determinants of India matched with empirical results of Pakistan except two determinates (i.e., trade openness and government consumption), while that of Indonesia do not match with Pakistan and India. For attracting more FDI into Pakistan and India, the management authorities' needs to ensure economic and political stability, provision of infrastructure, peace and security, encouraging domestic investment and adoption of appropriate macroeconomic stabilization policy. Furthermore, this study recommend the same measures for Indonesia and suggest that more future research work are required for empirical investigation of determinants of FDI in Indonesia, to enhance the desirable level of FDI into the country.

Keywords: foreign direct investment, Pakistan, India, Indonesia

INTRODUCTION

Foreign private investment can be categorized into two forms i.e., foreign direct investment (hereafter FDI) and portfolio investment. This study focuses only on the FDI. FDI could be outward or inward. Outward FDI refers to direct investment in abroad, while inward FDI refers to direct investment in host countries. Investment is the act of purchasing those goods, which can generate further goods. The Outward FDI is subject to incentives as well as disincentives of various forms. Risk coverage provided to the domestic industries and subsidies granted to the local firms stand in the way of outward FDI, which are also known as "direct investments abroad." Different economic factors encourage inward FDI. These include interest loans, tax breaks, grants, subsidies, and the removal of restrictions and limitations. Factors detrimental to the growth of FDI include necessities of differential performance and limitations related with ownership patterns. Other categorizations of FDI exist as well. Vertical Foreign Direct Investment takes place when a multinational corporation owns some shares of a foreign enterprise, which supplies input for it or uses the output produced by the multinational corporations (MNCs). Foreign direct investment is defined as a long-term investment by a foreign direct investor in an enterprise resident in an economy other than that in which the foreign

direct investor is based. It is generally acknowledged that foreign direct investment produces economic benefits to the recipient countries by providing capital, foreign exchange, technology, competition and by enhancing access to foreign markets (Crespo and Fontura, 2007). By bridging the gap between domestic savings and investment and bringing the latest technology and management know-how from developed countries, foreign direct investment (FDI) can play important role in achieving rapid economic growth in the developing countries (Khondoker and Mottaleb, 2007). FDI is one of the most important forms of international capital flows. Particularly for Less Developed Countries (LDCs) like Pakistan, India and Indonesia, FDI has been the most important source of investment and an important source of technological spillovers.

A transitioning economy often looks outward in order to find the opportunity for rapid growth. Inward FDI helps them to acquire the technology of the developed world and apply this more advanced technology to their industries. Transition economies may expect other benefits too. Since foreign firms increase competition, their presence may encourage greater efficiency in domestic firms. Even foreign investment may help to increase workers incomes, if it creates higher-paying jobs in the host country. Because foreign investment offers many potential benefits to host countries, policy makers are naturally interested in knowing what factors attract FDI. There is no presumption among many academics and policy makers that Foreign Direct Investment (FDI) is somehow special. One common view is that FDI helps accelerate the process of economic development in host countries. Many policy makers and academics struggle that foreign direct investment (FDI) can have important positive effects on a host country development effort (Alfrao, 2003). It is not exaggerated to say that FDI plays essential role in the encouragement of national economic development, bringing

innovative technology, up to date management and marketing techniques. When domestic resources are short to finance the development requirements, FDI is one of the best sources of external finance for lower income countries, like Pakistan, India and Indonesia.

Objective of the Study

Following are the main objectives of the study:

a. To analyze the effect of various factor on FDI inflows into Pakistan, India and Indonesia during the study period.

b. To suggest some measures for desirable level of FDI inflows into these selected countries.

LITERATURE REVIEW

Several empirical studies have been conducted concerning the factors determining FDI. Most of the studies utilize multiple numbers of theories or hypotheses in order to investigate the empirical linkage between FDI and variety of economic, social and political variables. But the key literature includes work by Dunning (1993), who introduced an Ownership-Location-Internalisation (OLI) paradigm to explain FDI by Multinational Enterprises. Dunning's location advantage theory provides a framework to identify important variables that influence FDI using three main categories: (a) economic, (b) social or cultural factors, and (c) the political environment. Overall, Dunning concludes that foreign countries that attract investment by multinational firms have a large and growing market, a high gross domestic product, low production costs, and political stability. Various researchers studied the demand side factors such as market size, incentives and operating conditions, infrastructure and political stability, while they ignored the supply side determinants, such as economies of scale, product life cycle and internalization. Also the demand side determinants have

analyzed by using aggregate variables but they did not give any proper coverage to supply side determinants due to non-availability of data. While many of studies have been conducted regarding to test the FDI determinants and found the size of the market almost universally as an important determinant of FDI in developing countries. Asiedu (2002) applying Least Square techniques for all estimations in the study and found that openness, return on investment and GDP as proxy variable for market size, are significant variables for FDI fostering and infrastructure and political risk found insignificant. Quazi and Mahmud (2004) investigated that which factors, either economic or non-economic, drive the flow of FDI into South Asia and found that economic freedom, openness, prosperity, human capital, and lagged FDI significantly increase FDI inflow into South Asia, while political instability depresses it. Naeem, *et al.* (2005) used time series data from 1970-71 to 1999-2000 for Pakistan and found the main economic factors are market size, domestic investment, trade openness, indirect taxes, inflation, and external debt. Khondoker and Mottaleb (2007) evaluated panel data from 60 less developed countries and found that market size and GDP growth rate, business environment, modern communication facilities significantly affect the FDI inflow and FDI positively and significantly affects the GDP growth of a country. Jana (2008) analysed that as one would expect that GDP and access to European common market are important determinants of the foreign direct investment level in the transition economies.

TRENDS ANALYSIS OF FDI INFLOWS INTO PAKISTAN, INDIA AND INDONESIA

Data on FDI inflows into Pakistan, India and Indonesia for the period from 197 to 2008 are given in Table 1. As the data shows that in 1971 the FDI inflows was US$ 299.07 million, US$ 4.766 million and US$ 1.00 million into Indonesia, India and Pakistan respectively. Gradually with the globalization, the FDI inflows into these countries increased. The total world FDI inflows reached to US$ 1833324 million in 2007. Data in Table 1 depicts that in 2006 the FDI inflows reached to US$ 5579.693 million, US$ 17453.1 million, and US$ 4273 million into Indonesia, India and Pakistan.

According to the report of Embassy of Pakistan (2008), FDI reached to US$ 3481.6 million during the first 10 months (July-April, 2008) of the current fiscal year as against US$ 4180.8 million in the same period last year, revealing a decline of 16.7 %. Approximately 57 % of FDI has come from three countries, namely, the UAE, USA, and UK. USA investors with 33.4 % investment are on the top during the first ten months.

According to Government of Indonesia (2008) statement, FDI inflows into Indonesia rose by 73 % to US$ 10.3 billion during 2007; this is because of political stability and an improving outlook for Southeast Asia's biggest economy. The state investment agency (BKPM) said foreign investors invested mainly in the telecommunications, pharma-ceuticals, pulp and food-related sectors, considered attractive because of the potential for consumer spending by Indonesia's 226 million people to increase. Government of India (2009) reported that the total cumulative FDI inflows into India from 1991-2008 was US$ 99,005 million. The service sector (financial and non-financial) enhanced 22% FDI during 2005-2008, computer software and hardware 12% FDI and telecommunication sector enhanced 8%.

Table 1. FDI Inflows into Pakistan, India, and Indonesia; 1971 to 2008

(US$ million)

Years	Indonesia	India	Pakistan	Years	Indonesia	India	Pakistan
1971	299.07	4.766	1	1990	109.3	236.69	245.3
1972	253.52	17.79	17	1991	148.2	73.53764	258.4
1973	581	37.91	-4	1992	177.7	276.5124	336.5
1974	182.12	56.97	4	1993	200.4	550.37	348.6
1975	1292.06	-10.3262	25	1994	210.9	973.2715	421
1976	747.59	-7.70643	8.2	1995	436	2143.628	722.6
1977	235	-36.06	15.2	1996	619.4	2326.057	922
1978	417.71	18.09	32.3	1997	467.7	3577.33	716.3
1979	226	48.57	58.3	1998	240.8	2634.652	506
1980	300.09	79.16	63.6	1999	1865.621	2168.591	532
1981	133	91.92	108.1	2000	134	3584.217	308
1982	225	72.08	63.8	2001	-297.79	5471.947	383
1983	292	5.64	29.5	2002	145.0855	5626.04	823
1984	222	19.24	55.5	2003	-596.92	4322.748	534
1985	310	106.09	131.4	2004	1896.083	5771.297	1118
1986	258	117.73	105.7	2005	8336.257	6676.524	2201
1987	385	212.32	129.4	2006	5579.693	19962	4273
1988	576	91.25	186.5	2007	6928	22950	5333
1989	682	252.1	210.6	2008	….	….	….

Source; *World Development Indicator, the World Bank Group, 2008*
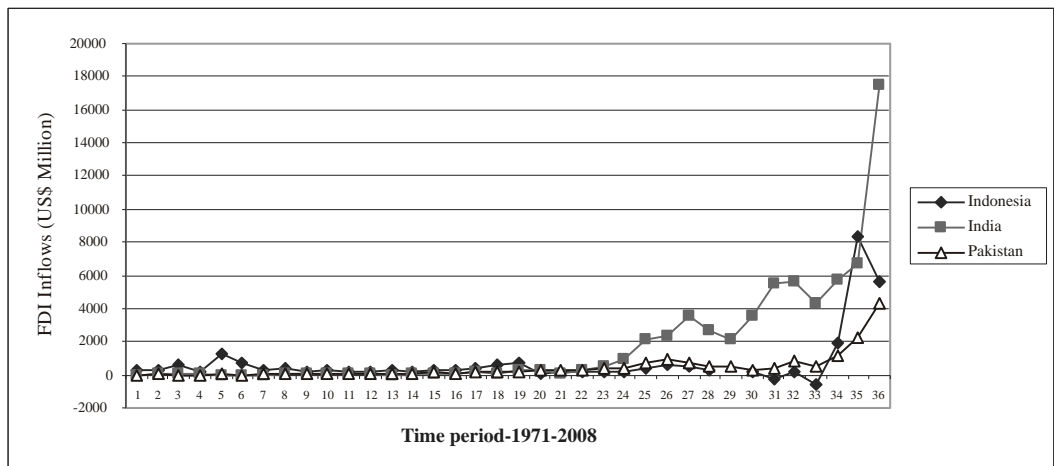
Source: On the basis of Table 1 data

Figure 1. Comparasion in FDI Inflows into Pakistan, India and Indonesia

DATA SOURCES AND METHODOLOGY

This study is based on secondary data ranging from 1970 to 2008. Data used in this study have been obtained from Economic Survey of Pakistan (various issues), Economic Survey of India (various issues), World Investment Report (various issues), and the World Bank, World Development Indicator (various issues) respectively. Linear regression models would be used to analyze the various factors effects on FDI inflows into Pakistan, India and Indonesia during the study period. The ordinary least squares method would be used as an analytical technique. Due to non-linearity, the data have been transformed into log form. E.View statistical software has been used for computation analysis.

Econometric Model

Foreign investors undertake investment abroad with the prime objective to earn maximum profit. While as it is known that return particularly on FDI, taking forms of profit, expansion of business, market development and innovations, are linked to different factors of the host country and varying degree of risk attached with them. There is no single theory to explain FDI, but many researchers suggested a number of economic, social and political variables determining the inflows of FDI based on various theories of FDI (Ioannatos, 2003; and Aseidu, 2002, 2005)

The symbolic form of the simple log linear regression model is given as follow:-

$$\ln FDI = \alpha_0 + \alpha_1 \ln GDP + \alpha_2 \ln INF +$$
$$\alpha_3 \ln DI + \alpha_4 \ln RI + \alpha_5 \ln INFRTR +$$
$$\alpha_6 \ln Tax + \alpha_7 \ln TOP + \alpha_8 \ln GC + \mu \quad (1)$$

Equation (1) states that FDI is a positive function of the market size measured by gross domestic product of the host country, domestic investment, return on investment, trade openness, and infrastructure facilities. While the effect of inflation rate, government consumption, and taxes will be negative on FDI inflows.

Where:
- FDI = Foreign Direct Investment,
- GDP = Market size proxy used Gross Domestic Product,
- DI = Domestic Investment,
- TOP = Trade Openness (X+ M/GDP),
- INFRTR = Infrastructure proxy used Expenditure on Electricity, Gas, Transport and Communication,
- GC = Government Consumption,
- Tax = Indirect Taxes,
- INF = Inflation,
- RI = Return on investment measured by 1/GDP per capita,
- μ = Error term

The explanatory variables and error term (μ) will follow the least square assumptions.

RESULTS

The results obtained are acceptable and significant on the basis of R-squared (R^2) and adjusted R-squared values. Almost multicollinearity problem has been removed by dropping some collinear variables during regression analysis and the Durbin Watson Statistics is 2 or very near to 2, which shows no autocorrelation problem as well.

The estimated regression equation of economic determinants of FDI for Pakistan is;

$$FDI = -3.372 + 4.105\ GDP + 1.911\ INF -$$
$$0.405\ GC + 0.931\ INFRTR - 2.591\ Tax +$$
$$4.901\ DI + 3.711\ TOP + 5.143\ RI \quad (2)$$

In case of Pakistan, results of the Table 2 shows that one of an important variable that is market size has been found positively significant at one percent level of significance. Chakrabarti (2001, 2003), Ioannatos (2003), Banga (2003), and Eli *et al.*, (2006) also found a positive significant relationship between FDI and market size. This study found that the

impact of infrastructure is positively significant at one percent level of significance. Asiedu (2002), and Ioannatos (2003), also found positive significant results. Another key variable is trade openness found highly significant with positive sign at one percent level of significance. Aseidu (2002), and Ioannatos (2003) also found positive relationship between trade openness and FDI inflows. As expected domestic investment has been found highly significant with positive sign at one percent level of significance. Razin (2003) and Yasmin *et al.*, (2003) also found positive significant results. The effect of indirect tax on FDI has been found significant with negative sign at five percent level of significance. Chakrabarti (2003) also found negative significant relationship between taxes and FDI inflows. Similarly return on investment has been found statistically significant with expected positive sign at five percent level of significance. Tsai (1994) also found positive relationship between return on investment and FDI inflows. However, inflation rate have been found insignificant with unexpected positive signs while government consumption has been found insignificant with expected negative sign. But it does not mean that these variables have no effect on FDI but they are equally important in the determination of FDI inflow.

The estimated regression equation of economic determinants of FDI for India is;

$$FDI = 36.576 + 2.014 GDP + 0.632 INF + 0.402 GC + 12.995\ INFRTR + 1.811 DI - 10.001\ TOP \qquad (3)$$

In case of India ,the results of Table 2 shows that market size has been found statistical positively significant at 5% level of significance. This study found that the impact of infrastructure is positively significant at 1% level of significance. Domestic investment has been found highly significant with positive sign at 5% level of significance. However,

inflation rate, trade openness and government consumption have been found insignificant with unexpected signs.

The estimated regression equation of economic determinants of FDI for Indonesia is;

$$FDI = 15.954 + 0.944\ GDP + 0.287\ INF - 1.903 DI - 1.096\ TOP \qquad (4)$$

The results obtained for Indonesia given in Table 2; do not match with the results of Pakistan and India. Some of the results even do not support the study hypotheses resulting in R-squared value of 0.17. The calculated results are insignificant because of may be error in the data, as for Indonesia the data for regression analysis have been taken from the World Development Indicator (2008, 2009), because access to local survey of Indonesia was not possible, while for Pakistan the data have obtained from Economic Survey of Pakistan and World Development Indicator and similarly for India the data have been taken from Indian Economic Survey (various issues). However, it is pertinent to mention that to conduct more research work on FDI determinants in Indonesia, it is better to utilize data from different surveys like local surveys data and the World Bank surveys.

CONCLUSIONS

The objective of the present study was to investigate the influence of various factors on FDI inflows in to the study area. Meaningful results have been obtained through data analysis which could help in policy making for augmenting FDI inflows. It has been acknowledged that FDI bring benefits to the recipient countries by providing capital, foreign exchange, new technology and in such a way bridging the gap between domestic savings and investment. Empirical result of the study shows that the most important economic variable found was market size that shows a country's development levels permit the

Table 2. Estimates of Economic Determinants of FDI

Dependent Variable: FDI
Method: Least Squares

	Pakistan	India	Indonesia
Independent Variables	Coefficients (t-statistics)	Coefficients (t-statistics)	Coefficients (t-statistics)
GDP	4.105 (3.33)*	12.014 (2.94)**	0.944 (1.52)
INF	1.911(0.81)	0.632 (2.01)**	0.287 (0.96)
GC	-0.405 (-0.32)	0.402 (1.21)	……………
INFRTR	0.931 (2.75)*	12.995 (3.10)*	……………
Tax	-2.591 (-2.61)**	……………..	……………
DI	4.901 (3.79)*	1.811 (2.15)**	-1.903 (-2.10)
TOP	3.711 (3.50)*	-10.001 (-2.21)	-1.096 (-1.49)
RI	5.143 (2.69)**	………..	………..
C	-3.372 (-0.77)	36.576 (1.71)	15.954 (2.45)
R-squared (R^2)	0.96	0.91	0.17
Adjusted R-squared	0.95	0.90	0.03
S.E. of regression	0.50	0.67	0.87
Akaike info criterion	1.71	2.26	2.72
Schwarz criterion	2.21	2.61	2.98
F-statistic	102.57	50.76	1.26
Durbin-Watson statistic	2.04	1.98	1.30

Note: (i). *The asterisks *, **, shows that estimates are significant at 1%, and 5%, level of significance respectively.* (ii). *The figures in parenthesis are t-statistics*

exploitation of economies of scale which is likely to increase the attractiveness of FDI vis-à-vis alternative forms of internalization. The effects of infrastructure facilities are positively significant in explaining inflow of FDI. In case of Pakistan the effect of indirect taxes has been found significant with negative sign. The aim of Multinational corporations is to earn high profit; therefore, it can be assumed that they are sensitive to tax factors, as tax has a direct effect on their profit. Such as the domestic investment shows a positive significant result, which means that domestic investors are investing in Pakistan. The effect of trade openness in case of Pakistan has been significant and it shows liberalization, which are conducive in affecting FDI inflow. However in case of Pakistan some variables, such as inflation and government consumption have been found insignificant, but it does not mean that these variables have no role to affect

FDI inflow. The empirical results of India matched with the results of Pakistan except two determinates (i.e., trade openness and government consumption), while the results of Indonesia do not match with the economic determinants of FDI for Pakistan and India. For the encouragement of foreign direct investment into Pakistan and India, the policy makers of each respective country should ensure following measures: stable economic and political environment, provision of physical quality infrastructure, maintaining inflation rate, encourage domestic investment, curtail external debt, provision of financial incentives, attractive tax rate, peace and security, and consistency in the government policy. These all are the key factors for potential investors in making choices for investment. This study recommend the same measures for Indonesia and suggest that more future research work are required for empirical

investigation of determinants of FDI in Indonesia in order to enhance desirable level of FDI.

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