Infla-trade Effect on Inflow of Foreign Capital

Dr. Swapnamoyee P. Palit
Assistant Professor of Economics, KIIT University, Bhubaneswar

Abstract

FDI assumes a great significance in both developed and developing countries because of its immense potential to address the gap between the desired investment and the required savings. Along with this, its role in channelising the inflow of technology and technical know-how, managerial and organisational capabilities etc. is undisputed. So there has been a competition among the countries to create the appropriate environment so as to attract more FDI into their economies. This requires identifying the factors which attracts FDI inflow into the country like adequate infrastructure, governance policies, exchange rate, convertibility criteria, inflation, volume of trade etc. This paper analyses the role of Market size, inflation and trade openness in accelerating the inflow of FDI into the country along with analysing the combined inflation effect and trade openness effect in channelising the inflow of this vital form of foreign capital. Market size and inflation were found not to be significant in influencing the inflow of FDI into the country. Volume of trade and Trade openness was found to be highly significant at 5%.Also 'infla-trade', was found to be significantly influencing FDI inflow. The market size and volume of trade has positive effect while the FDI is negatively affected by inflation and the combined effect of inflation and volume of trade i.e., 'infla-trade'. Again while the marginal effect of inflation is found to be stable in the pre-reform period and increasing after reform, marginal effect of the volume of trade shows wide fluctuations.

Key Words : *FDI, Foreign capital, inflation, International trade, Trade openness.*

1. INTRODUCTION

Foreign Direct Investment (FDI) assumes a great significance for countries in general and developing and less developed countries in particular because of its immense potential of improving growth and economic development. With economic reforms across the globe and the consequential free mobility (relatively) of capital across borders, has further accentuated the importance of FDI in complementing the low saving and investment in the economy. Not only is it important for removing the financial barriers to economic growth but also due to its channelization of updated technological know-how, managerial skills all of which has immense externalities for the host economy. While these are the reasons for the FDI approvals for the host countries, the investors have different issues like creation of assets, tapping cheaper source of inputs, explore foreign source of technological and organisational capabilities etc.

The renaissance of economic systems brought about by globalisation through increased mobility of capital and economic convergence among the developed countries, have added positively to this vital form of foreign capital. Thus there has been increased competition among the

Access This Research Paper Online
http://EconPapers.repec.org/RePEc:jct:journl:v:12:y:2017:i:1:p:22-28
https://ideas.repec.org/a/jct/journl/v12y2017i1p22-28.html
http://jctindia.org/april2017/v12i1-4.pdf

How to Cite This Research Paper
Palit, Swapnamoyee P. Infla-trade Effect on Inflow of Foreign Capital. Journal of Commerce and Trade April 2017; 12 : 1; Pp. 22–28.

developing economies to attract FDI into the country. Particularly the profit seeking investments gets channelised due to their capital inflow friendly factors. Though many papers has identified several factors affecting the flow of FDI into the country, this paper particularly investigates into the significance of the factors like market size as determined by the GDP, the rate of inflation in the country as well as the trade openness proxied by the volume of trade over GDP in determining the FDI in India. These factors again have an influence depending on the type of FDI made which are categorised on several basis based on their motive i.e. efficiency seeking, market oriented or resource oriented, the type of investment and the relative size of the investment. While market oriented investment is influenced more by the market size, tax policies, inflation rate, good governance etc., resource seeking FDI may be affected by trade openness, resource location, trade and government policies towards extending benefits, mobility of capital etc.

India has been ranked 10th in the FDI inflows according to the World Investment Report, 2016. There has been a 26 Per cent jump in the FDI inflow into India from $35 billion in 2014 to $44 billion in 2015. However China ranks 3rd in this list with 3 times more FDI then India at $136 billion. While the global indicators shows a 38 Per cent increase in FDI, it has shown a decline for many developing and transitional economies. Thus there has been a competition in attracting this form of investment calling for an appropriate balance between regulatory and liberalising policies of the government. Keeping up with the pace and with the motive to smoothen the country as a FDI destination, the government has allowed 100 Per cent FDI by its approval in food products, pharmaceuticals, aviation, retailing, animal husbandry etc. Even FDI beyond 49 Per cent have also been approved in the defence sector. Only a few sector which are in the FDI prohibited list for security related reasons are railways, atomic energy, real estate, lottery and gambling. With these measures, India has eased the policies to attract FDI which has been worth $63 billion in projects in 2015 even replacing China (FDI Intelligence Report, 2016).

This paper has been divided into 3 sections. Section 1 gives the introduction along with the stated objectives and hypothesis. Section 2 makes a review of the relevant literature and section 3 gives the methodology and findings of the study. This is followed by conclusion and policy recommendations.

2. REVIEW OF LITERATURE

The economic development proxied by GDP and trade openness are found to be significant factors in influencing the inflow of FDI into the country (Miskinis and Juozenaite, 2015).It also finds the exchange rate to have a negative impact on the FDI flow in Greece. This negative impact is more in case of a weak and unstable currency of the country. The FDI is also significantly affected by the investment environment influenced by the level of corruption, budgetary deficit, public debt etc. which has to be improved upon for a higher FDI inflow into the country.

A negative association between trade openness and economic growth was found for Bangladesh (Adhikary, 2011) explained by the depreciating exchange rate, huge material imports and deficit in the trade balance. Inflation influences growth positively up to certain level or has been found to be neutral to growth acceleration. However beyond a threshold level its impact becomes negative through its indirect effect on various macroeconomic indicators like taxes, investments, exchange rates, volume of trade, FDI etc. All these indicators in turn affect the inflow of FDI into the country.

Foreign direct investment, inflation and trade-openness are found to have significant effect on the performance of manufacturing exports in Tanzania. While the relation is positive for trade-openness and FDI on manufacturing exports, a negative relation exist with inflation, necessitating reduction of inflation rate to enhance the performance of the manufacturing export sector (Kenani, 2014).

Both the trade openness and inflation is interlinked in a commendable way. While many studies have found a positive relationship between the openness of trade and inflation, contrary relation has also been reported by some other studies. Study by Jin, 2000, finds that trade openness reduces the inflationary pressure on the economy through increase in the economy's output, better resource allocation, increased foreign capital investment etc. Similar findings are supported for the Nigerian economy which finds the impulse response function of inflation to the shock of openness positively significant up to the second period and becoming negative thereafter for the rest of the periods (Ada et. Al, 2014). However lack of a competitive environment in the domestic market and instability in price in non-communal sectors has been found to reverse this trend bringing a positive variation between trade openness and inflation (Sepehrivand and Azizi, 2016).This positive relationship was also found to be there in D-8 countries due to the increase in international energy prices as well as due to exchange rate fluctuation. Increased export earnings increases liquidity and high demand will lead to higher inflationary pressure.

FDI has been found to be insignificant in influencing GDP in Nigeria (Omankhanlen, 2011). Again inflation was found to be negative but insignificant factor in influencing the flow of FDI, while foreign exchange rate was found to be significant and positive in attracting FDI into Nigeria. Similar findings have also been substantiated by other studies like by Bibi (2014) in her study on Pakistan, where FDI was found to be insignificant though positive in influencing the economic growth. It further finds a significant negative relationship of trade openness with economic growth because of the huge trade deficit in Pakistan as its volume of imports are much higher than exports and also due to depreciation in its exchange rate.

Study by Antwi & Antwi and Poku (2013), on FDI finds significant positive relationship between trade openness, inflation, exchange rate, per capita GDP, natural resources and liberal trade policies with the inflow of FDI in Ghana. However it also finds a significant negative relationship of FDI inflow with the infrastructure due to the poorly developed transport system in the country which acts as one of the major hindrance to the FDI inflows. It suggests that accelerating the process of liberalisation is required in Ghana as these policies have had profound positive impact on the FDI inflow in Ghana.

3. METHODOLOGY

The study uses Time series data from the World Bank indicators for the period 1980 to 2012 for India. Based on its objectives it has chosen the FDI in India as the dependent variable and the market size, trade openness and inflation as the explanatory variables so as to assess their impact on FDI.

The GDP at constant prices is used as a proxy for the market size of the economy which is expected to be positive. The investment in the country seeks to ensure a large market of its goods and services to sustain the inflow.

Trade openness is measured in terms of the total volume of trade as a ratio of the GDP of the country. Of its various versions adopted in several studies, the present study captures this variable as the sum of nominal exports and nominal imports divided by the nominal GDP of the country. Thus TO=(Nominal Exports+ Nominal imports)/Nominal GDP.The expected sign of this Trade openness should be positive as more Trade openness implies a greater bias towards the foreign market which in turn would be liberal to flow of foreign capital.

The rate of inflation affects the volume of trade both directly and indirectly. Here it is taken as a proxy for the level of economic stability in the country. It is expected to have a negative sign with the FDI as the inflow seeks those countries whose economies display some degree of economic stability which reduces the uncertainty of return.

The study uses the following model (shown

by equation i) to estimate the effect of market size, inflation and trade openness on the FDI in India. As both inflation and the volume of trade themselves influences each other, the model estimates the combined effect of both these variables by taking the variable inf* VT i.e. the product of inflation and volume of trade which we term here as 'infla-trade', measured by the coefficient β5 in the model. Inflation itself influences the total volume of trade in the country both directly and indirectly. Directly this impact is in terms of changes in the value of the domestic currency with affects the real income of the economy. The indirect effect of inflation on the volume of trade is through the influence on the exchange rate thus affecting the overall earning from trade of goods and services.

$$FDI = \beta_0 + \beta_1 GDP_{MP} + \beta_2 Inf + \beta_3 VT + \beta_4 TO + \beta_5 (\text{Infla-trade}) + \varepsilon \quad (i)$$

Where FDI = Foreign Direct Investment

GDPmp = Gross Domestic Product at market prices

Inf = Inflation

VT = Volume of Trade (total of export and import)

TO = Trade Openness

'infla-trade' = product of inflation and the volume of trade i.e., Inflation*VT

ε = error term

$$FDI = -14.45 + (1.62E{-}12)\ GDPmp + 0.0508\ Inf\ (3.5E{-}08)\ VT + (1.05E + 08)\ TO + (4.31E{-}09)\ \text{infla-trade} + \varepsilon \quad (ii)$$

Table 1

Regression Results of the Determinants of FDI Inflow in India

Overall values of the estimated model (1980-2012) R^2=0.88 Adj R^2=0.86 F=39.129 (sig F=1.52E-11)			
	Coefficients	t-stat	p-values
Intercept	–14.45	–2.29	0.030
GDPmp	1.62E-12	0.136	0.892
Inflation	0.051	0.1157	0.908
Volume of trade	–3.5E-08	–1.67	0.256
TO	1.05E+08	3.1315	0.004
Infla-trade	4.31E-09	1.61	0.124

Source: *Author's own calculations.*

The regression equation (ii) has been estimated by taking the data of these variables over the period 1980 to 2012 for India. The data has been taken from the World Bank Indicators. Here GDPmp and inflation were found not to be significant factors in affecting the FDI inflow into the country. The model is a good fit as seen by the R2 value in Table 1 which is found to be 88 per cent. The F-test is also found to be significant as seen in the table 1. The total volume of trade and Trade openness are found to be highly significant in influencing the total volume of FDI in the country. The significant factor to be marked is that the FDI varied negatively with the total volume of trade and is positively affected by trade openness. To analyse this factor further the trend of export and import over this period in India was analysed. It was reflected that India has trade deficit for all the years taken in the period of study (figure 1). Thus import has been more than the exports leading to a net outflow of foreign exchange. However the overall flexibility in policies to ease mobility of capital and goods like easy convertibility on the capital account, hassle free licensing procedures, flexible repatriation policies proxied by trade openness has a positive influence on the FDI inflow into the country.

Though the effect of inflation and volume of trade is found to vary in reverse way in significance and direction, but their combined effect measured by 'infla-trade' is found to be significantly influencing the inflow of FDI in positive direction. As observed unlike expected the inflation is found to have a positive sign in the estimation. This is because inflation was found to vary within a limited range of 6 Per cent in the given years except a few years which has showed wide fluctuations. Thus overall inflation is found not to affect the inflow of FDI adversely. But the volume of trade was found to have a negative sign because of a higher import component. So the 'infla-trade variable is more important in reflecting the actual impact of these two variables on the inflow of FDI into the country. Due to this 'infla-trade' variable, coefficient of these individual variable i.e., inflation and volume of trade is of less importance than the marginal effect of these components on the FDI inflow. To achieve this

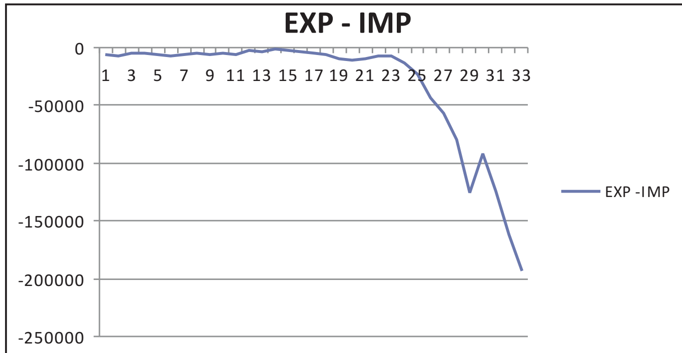
objective the model further captures the inflation effect and volume of trade effect given by the derivative of the FDI function with respect to each of these variables as given below in equation (iii) and (iv) respectively.

$$\partial FDI/\partial Inf = \beta_2 + \beta_5 VT \qquad \text{... (iii)}$$

$$\partial FDI/\partial VT = \beta_3 + \beta_5 Inf \qquad \text{... (iv)}$$

Figure 1

Trade Deficit in India (1980-2012)



These effects are depicted through figure 2 and figure 3 below.

Figure 2

Marginal Effect of Inflation (Inflation Effect)

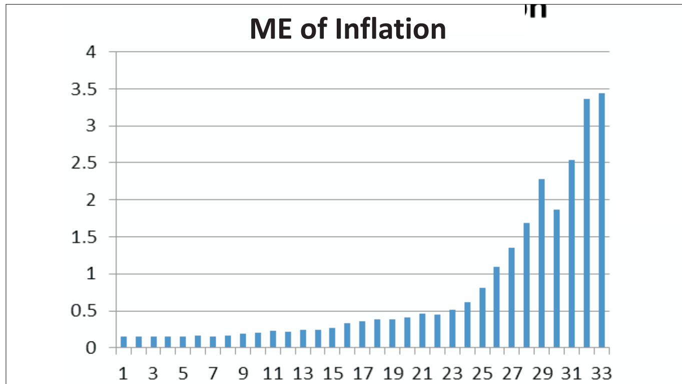
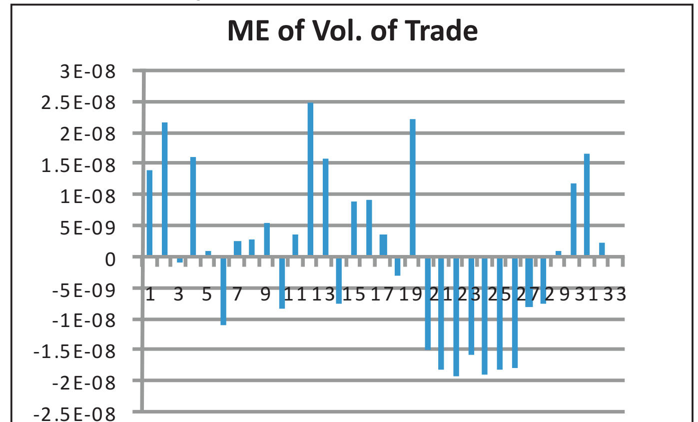


Figure 3

Marginal Effect of Volume of Trade (Volume of Trade effect)



The marginal effect of inflation captures the variation in FDI with a change in the rate of inflation given the volume of trade. It is found to be almost stable from 1980 to 1991 i.e., the pre-reform period where after it shows an increasing trend with a large variation in the post-reform period. This shows that the negative volume of trade effect is outweighed by the positive inflation effect leading to a positive flow of FDI in the post reform period. However the marginal effect of volume of trade on FDI (shown in Figure 3) reflects wide fluctuations in both the pre-reform and post reform period, with the fluctuations more severe in the later period. As is seen from the diagram in the post- reform period, the FDI inflow even turns negative due to the marginal effect of the volume of trade.

To analyse further the differences in impact of these variables in the pre and post reform era, their variations were measured in each of these two periods (as shown in Table 2).

Table 2

Estimation Results of The Determinants in Pre And Post Reform Period

Overall values of the estimated model (1980-1990) Pre-Reform Period R^2=0.73 Adj R^2=0.46 F= 2.72 (sig F= 0.147)				Overall values of the estimated model (1991-2012) Post Reform period R^2=0.90 Adj R^2=0.87 F=29.138 (sigF=1.69E-07)			
	Coefficients	t-stat	p-values		Coefficients	t-stat	p-values
Intercept	-1.982	-1.131	0.309	Intercept	-36.68	-3.489	0.003
GDPmp	5.78E-12	0.903	0.407	GDPmp	1.11E-11	0.811	0.428
Inflation	0.046	0.811	0.454	Inflation	0.325	0.583	0.568
Volume of trade	-2E-08	-0.355	0.736	Volume of trade	-9.6E-08	-2.493	0.024
TO	1.172	0.809	0.455	TO	2.08E+08	4.141	0.00076
Infla-trade	-2E-09	-0.935	0.392	Infla-trade	4.85E-09	1.569	0.136

Source: *Author's own calculations.*

None of these variables were found to be significant in the pre-reform period. In the post-reform period i.e., from 1991-2012, the variables were found to vary in the same way as for the overall period of estimation. GDP at market prices and inflation were found not to be significant whereas the volume of trade, trade openness and 'infla-trade', were found to affect the FDI inflow significantly. Thus it can be seen that these factors have assumed more importance only in the post-reform era with the liberalisation policies affecting trade and mobility of goods, services and capital.

4. FINDINGS

Thus the overall findings of the study are:

(i) The volume of trade as well as trade openness prevailing in the economy are found to be important factors in channelizing the inflow of foreign capital into the country. While it was found to be positively related with trade openness indicating easy transparency in policies orienting foreign capital, it is negatively related with the overall volume of trade due to a high trade deficit of the country over the period analysed.

(ii) Gross domestic product at market price and the inflation rate were found not to be very significant in influencing the total volume of FDI inflow into the country.

(iii) 'Infla-trade', which is the variable reflecting the combined effect of inflation and the total volume of trade in the country was found to be significantly influencing the FDI inflow. Both their marginal effect on the inflow of FDI given by 'inflation-effect' and the 'volume of trade effect', was observed. While 'inflation effect' was found to be stable in the pre-reform period, it showed increasing trend with huge variations over the years in the post-reform period. However the volume of trade effect was found to vary in a different way. It shows high fluctuations in both the pre and post reform period, with the variations more severe in the later period.

(iv) An overall analysis reflected that none of the above factors investigated were found to be significant in the pre-reform period taken. Their significance in the direction of the variations in the overall period was found only in the post-reform period, after a globalised integration of the economy through enhanced privatisation and liberalisation.

5. CONCLUSION

Significant improvement in the overall trade situation and policies oriented towards them is required so as to reverse the negative impact of trade openness on FDI inflows in India. FDI is one of the most important source of non-debt finance which not only increases the capital investment but also brings in technical know-how, management etc. Along with these, its spill over effects through forward and backward linkages helps in generating further investment and employment. So it necessitates creating the appropriate environment to attract FDI into the country. The present study finds market size and inflation to be insignificant but positive. This is because inflation in the country has fluctuated within a limited range reducing the uncertainty component leading to flight of capital. However the marginal effect of inflation and volume of trade on FDI reflects the actual impact of these variables on the inflow of FDI. It finds the volume of trade, trade openness and infla-trade i.e., the combined effect of inflation and trade to be significantly influencing the inflow of FDI in India. The pre and post reform analysis finds none of the factors to be significant in the pre-reform period while volume of trade, trade openness and infla-trade was found to be highly significant in the post reform period like in the overall period of study. However the market size though insignificant varied positively with FDI.The rate of inflation which was also found to be insignificant varied positively with FDI showing low impact of this variable on the FDI inflow. The on-going liberalising policies of the government in this field will highly facilitate in making India a safe hub for FDI considered as a

driver of growth. Maintaining the price stability as well as an improved balance of trade is required to ensure a persistence as well as growth in the inflow of FDI into the country.

●

REFERENCES

1. Ada, Ojoko Emmanuael, Adejumo Oyeronke, Adekanye James Odunayo, Victor Olesegun (2014): Trade Openness and Inflation in Nigerian Economy: A Vector Error Correction Model (VECM) Approach, Research Journal of Finance and Accounting, Vol.5 (21), pp. 74-85. .
2. Adhikary, Bishnu Kumar (2011): FDI, Trade-openness, capital formation and Economic growth in Bangladesh: A Linkage Analysis, International Journal of Business and Management, vol.6 (1), pp. 16-23.
3. Antwi, George Owusu, James Antwi and Peter K.Poku (2013): International Business and Economic Research Journal, vol.12, No.5, pp.573-584.
4. Bibi, Sadia (2014): Impact of Trade Openness, FDI, Exchange Rate and Inflation on Economic Growth: A Case Study of Pakistan, International Journal of Accounting and Financial Reporting, vol.4, No.2, pp.236-257.
5. Hanif, M.N and Irem Batool (2006): Openness and Inflation: A case study of Pakistan, MPRA paper, no. 10214: 1-8.
6. Intelligence Report, 2016 at current affairs.gktoday.in/current-affairs/fdi.
7. Jin, Jang C (2006): Openness, Growth and Inflation: Evidence from South Korea before the Economic Crisis, at http://faculty.washington.edu/karyiu/confer/Gjob/papers/jin.pdf, pp.1-35.
8. Kenani, Mwakanemela (2014): Impact of FDI Inflows, Trade Openness and Inflation on the Manufacturing Export Performance of Tanzania: An Economic Study, International Journal of Academic Research in economics and Management Services, vol.3 (5), pp.151-165.
9. Miskinis, Algirdas and Iima Juozenaite (2015): A Comparative Analysis of Foreign Direct Investment Factors, Economika, vol. 94(2), pp.7-27.
10. Omankhanlen, Alex Ehimare(2011):The effect of Exchange Rate and Inflation on Foreign Direct Investment and its Relationship with Economic Growth in Nigeria, Business Intelligence Journal, vol.4, No.2, pp 4-16.
11. Sepehrivand,Aram and Jabar Aziza(2016): The Effect of Trade openness on Inflation in D-8 member countries