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United States of America FDI and trade as complementory or subsittute for Pakistan

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The aim of study is the empirical investigation that FDI and trade is complemented or substitute for Pakistan. We also analyzed the country characteristics like the lack of capital and comparative advantage and abundance of labor. The effect of FDI on trade has been observed by dividing the FDI in industry and manufacturing sectors. We will use the secondary data for the variables selected of host country Pakistan reliable data have been collected and verified by going through various sources like US census bureau Bank, WDI and IMF. The time series data for 21 years is collected from the 1988 to 2009. For our purpose of analysis the least square methodology and four models has been developed using ∆imports and ∆exports as dependent variable whereas FDI total and FDI in industry and manufacturing sector as independent variables. To support the evidence individual t-test and interpretation of the β1 has been developed. Pakistan is having lack of capital, infrastructure and technology so; foreign firms are investing a lot in the gas field's exploration, telecom and food industries. Similarly Pakistan has the comparative advantage of both the resources and also the abundance of labor. More importantly the Pakistan is providing the investor free environment for the foreign firm to operate in the country. Pakistan has been receiving the large amount of investment into various sectors like telecommunication, oil and gas development, food and real estate. The USA has been investing a bulk of investment into these sectors. This study has been conducted by the division of FDI in the industry and manufacturing. Foreign direct investment (FDI) in Pakistan is a major external source to meet obligations of resource gap, human resource development and goal achievement. Pakistan has abundance in labor and comparative advantage of natural resources. This study will reveal that FDI has increased the production at industry level is increased and has enhanced the exports of the Pakistan. On the other hand the FDI has developed various industries of Pakistan like telecom, food and oil and gas exploration fields.

Key words. FDI, US census bureau Bank, WDI and IMF,

INTRODUCTION

In the past Empirical studies showed that FDI works both for trade as complimentary and substitute role. FDI and trade both behave as complements and where the trade cost is very high (Pontes, 2005). FDI has been an important factor and has been playing a pivotal role in rapid growth of exports (Sun, 2001). The relationship between trade and FDI is not a straightforward one.

Some models suggest a positive relationship and some a negative relationship the recent seminal work of Markusen et al. (1996). The trade between US and Pakistan has risen to 631 millions to 1544 millions in 2009.

There is found to be the fundamental justification that found to be the choice for the location and the obvious Foreign Direct Investment trade flows. . Due to lack of capital in the host country and it results higher relative

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returns to the scale. There is ultimate negative effect to the source country in terms of both the exports to the host country and imports from the host country.

The second fundamental justification is comparative advantage of manufacturing and market size in the host country consider as comparative advantage of the host country Pakistan. To utilize this advantage the Flows of FDI and MNE's of the source country invest in the from the host country as well. In these two fundamental justifications the supply driven FDI flows from the different regions just like the America and Pakistan. These flows of FDI into Pakistan can be called as the vertical FDI by United States into Pakistan of countries different in regions.

Predictions about the relationship between FDI and trade crucially depend on whether FDI is vertical or horizontal: theories on horizontal FDI predict a negative relationship whereas theories on vertical FDI predict a positive relationship. Two approaches have been adapted an ad generally and hoc approach. Theoretical framework and have adopted an *ad* generally *hoc* approach

LITERATURE REVIEW

G. Zarotiadis and N. Mylonidis have worked out on different arguments regarding the FDI and trade. They have concluded from their research that there is a significant and complimentary effect of FDI on imports fits perfectively to the theoretical discussion. It recognizes that intensified activity as result of FDI has positive effects on imports (Zarotiadis; Mylonidis, 2005). The reason for this positive effect between FDI and Imports is that the home country outsourcing from the investing country. Different countries have different significant and opposite sign regarding the specific industry FDI on imports.

José Pedro Pontes has found that the relationship between foreign direct investment and trade is positive and non-monotonic This relationship is positive where FDI and trade both behave as complements and where the trade cost is very high (Pontes, 2005). This relationship is negative where FDI and trade both behave as substitutes and has with low values of the trade costs.

José Pedro Pontes conclude in his research that if the demand for the consumer goods is continuously elastic and the firms are allowed to select the prices by themselves endogenously. There is positive relationship between FDI and trade or trade cost considering the clear distinction between trade in both intermediate and finished goods. (José Pedro Pontes, 2005)

Joshua Aizenman and Ilan Noy both have made a contribution by their research on the FDI and trade. They found that if there is need to reduce the restriction on trade there needs to be the presence of large trade benefits and it is two way positive feedbacks. (Aizenman; Noy, 2005)

Frank Barry and John Bradley have worked on small economy's FDI and their tariffs (liberalized or not). They have given the idea that for small economies have smaller "tariff jumping FDI" and less dynamic in technological term as compared to the economies that are potential export oriented. Theses countries need liberalized trade arrangements for the increase in the substantial foreign direct investment. (Frank and Bradley, 1997).

However, if there is lack of streamlined bureaucracy and human capital, improving stocks of infrastructural there can be no attraction for the investment and have no increase in the substantial increase in the foreign direct investment.

Peter Neary has done research based on the FDI and trade tariffs. He found that the incumbent domestic firms reduced the profitability of foreign direct investment and exporting given of external and internal tariffs in any configuration but not surprisingly (Neary, 2002). It encourages the plant consolidation if the internal tariff fall the FDI favors to operate more than single plant. It also favors FDI if the internal tariff falls for single unit plant relative to export. There is clear evidence that the importance of trade offs market access (lower marginal costs) and higher fixed costs. The firms may withdraw in spite the presence of liberalized union market if the fixed cost high when the competition is tough enough.

The imports can be stimulated at the gross manufacturing level, if the foreign investment substitutes for trade both at the product level and at the industry level (Swenson, 2004) instrumenting for potential investment endogeneity seem to be critical while carrying out this effect of FDI on the product and industry.

The Countries that are similar both in size and in relative endowments direct investment are important between these types of countries (Markusen and Maskus, 2002).

Sun has made research on the Chinese's FDI. He found that FDI has been an important factor and has been playing a pivotal role in rapid growth of exports (Sun, 2001). The effect of FDI varies from region depending upon the regional economic conditions and the degree to which the economic openness present and more importantly the different market orientation of Foreign direct investment. Since, FDI has been playing a promoting and significantly role in the coastal regions of the world than that of the central or western regions. Foreign direct investment is been considered as the catalyst for the economic growth relative to the exports.

By making change in the location of production of firms the export performance significantly affected. However even after the impact of quality on export demand and changes in relative prices changes (Pain and Wakelin, 1998). The growth of inward investment has been causing the improved and better export performance of a country. There may be a small negative impact on home

country export performance by the outward investment. In recent years the investment has removed the barriers of market entry and had a very little impact over the export of the goods in terms of the finished goods. There seems to be the evolution of the relationship between the investment and trade over the time.

The intra industry trade can be expanded for both the goods identical and differentiated if the foreign market size is large and natural or artificial trade barriers are relatively high and international investment appears to be attractive (Rowthorn, 1992) the intra trade industry can become more extensive in those blocks than at present for identical and differentiated products which are considered as large regional blocks.

Sizhong Sun worked on the FDI considering that FDI may affect the domestic firms. He concluded that the impact of foreign direct investment on the firms is positive on the geographical location alone and negative for the firm's owner structure and geographical location. So the impact of FDI on domestic firms is heterogeneous in nature (Sun, 2009). The firms that enjoy the presence of the foreign firms have been in benefits as compared to the domestic firms or private firms that are suffering and their export density is reduced.

Nguyen Thanh Xuan* and Yuqing Xing have used 5,919 foreign direct investment(FDI) projects approved by the Vietnamese Ministry of Planning and Investment since 1988, and compiled a database of actually disbursed FDI in Vietnam. The database covers FDI flows into Vietnam from 23 countries from 1990 to 2004. They have concluded that there is a great chance of enhancement of exports and foreign direct investment in the country if that country has liberalization for both trade and FDI. (Xuan; Xing, 2008) The devaluation in the currency of the trading country and in the host country's currency is also a very important determinant for the host country exports. The competitiveness of a country plays a very key role in enhancing the exports of a country along with the growing export capacity.

Robert E. Lipsey and Merle Yahr Weiss in their research paper "Foreign Production and Exports in Manufacturing Industries". They have found that Industries that contain heavy investment of a country abroad and those industries are found to be consistent and their level of activity to the investing country affiliates is positively related to the investing country exports and in the (LCD) less developing country markets and may be negatively related to the exports of the other countries. (Lipsey and Weiss, 1981). A very large number of foreign-owned manufacturing affiliates are found to be positively related to exports by foreign countries and, in the few cases where there is a clear relation, negatively related to the investing country's exports.

Rivero and Rubio have done research on the Spain manufacturing affiliate and FDI. They have given the idea that when FDI is divided onto its basic components of manufacturing and non manufacturing foreign direct investment. Their main determinants are similar special with respect to GDP and inflation both considered as variable. There is negative and significant effect of manufacturing FDI and non-manufacturing FDI for the user cost of capital and the unit labor cost (Rubio and Rivero, 1994). There found to be the long term relationship between the total FDI inflows and the other variables of macroeconomic that include the , the level of trade barriers , the lagged foreign stock, the level of real GDP and the rate of inflation.

Barrell and Pain both have worked on the US foreign direct investment. They concluded that Labor and capital both are considered significant and important factor for the FDI. Across country productions are of great substitution importance. If it compares to the choice of the locality from which the investment helps in financing the productions and it happens in the case of relative capital cost (Barrell and Pain, 1996).

ESTIMATION FRAMEWORK

United States of America is the largest foreign investor into Pakistan. So, FDI by US has been exercising complex and countervailing effects on the trade flows between Pakistan and United States of America. These affect have been found in different aggregate levels Swenson (2004) .The imports of the specific commodities of Pakistani imports has been affecting at different aggregate levels. We have applied the empirical methodology in this paper for the validation of results. She has checked effect of FDI on the specific commodity in the wider industry and furthermore she also analyze this affect of FDI on the commodity as wider the scope to the whole industry. However the whole industry effects either positive or negative. This will depend on the bilateral linkage between Pakistan and USA. The demand spillovers created by the foreign investor of USA into Pakistan. According to the discussion above we use the same methodlogy for the exports of Pakistan to USA.

We start our work with a regression specification in equation 1 (a). We checked the effect of total FDI on imports .in equation 1 (b) we have checked the effect of Total FDI on exports Pakistan.

$$\Delta \textbf{Import nm, t} = \beta \textbf{1Total FDI } m, t\text{-}1 \ + \ \textbf{TGDP } t + \ \textbf{RER } t \ + \ \textbf{є } t \qquad \text{eq.} \qquad (1a)$$

$$\Delta \textbf{Export nm, t} = \beta \textbf{1Total FDI } m, t\text{-}1 \ + \ \textbf{TGDP } t + \ \textbf{RER } t + \ \textbf{є } t \qquad \text{eq.} \qquad (1b)$$

In the above equation 1(a) ΔImport nm, t indicates the change in the Pakistan n imports from the m USA and ΔExport nm, t change in the Exports of Pakistan to the United States of America m. β 1Total FDI m, t-1 is taken as lagged value of FDI of the study period. Other variables are taken in the equation as the GDP and real effective rate of exchange of Pakistan. (Country m).

Table 1. Effect of FDI on pakistan's imports changes.

Variables	Equation 1(a)	Equation 2(a)
Total FDI	.509	-.031
Ind FDI		.528
Man FDI		-.078
Change in RER	-.083	-.121
Change in GDP	-.162	.272
R2	.259	-.031
DW Test	.509	.528

Table 2. Effect of FDI on pakistan's export changes.

Variables	Equation 1(b)	Equation 2(b)
Total FDI	.273	---------
Ind FDI		.27
Man FDI		.029
Change in RER	.169	.196
Change in GDP	0.151	.157
R2	.163	.164
DW Test	2.18	2.16

$$\Delta \textbf{Import nm, t} = \beta 2 \textbf{FDI } Ind. \text{ m, t-1} + + \beta 3 Man FDI + \beta 4 \textbf{TGDP } t + \beta 5 \textbf{RER } t + \text{€t} \quad \text{eq.} \quad (2a)$$

$$\Delta \textbf{Export nm, t} = \beta 2 \textbf{FDI } Ind. \text{ m, t-1} + \beta 3 Man FDI + \beta 4 \textbf{TGDP } t + \beta 5 RER t + \text{€t} \quad \text{eq.} \quad (2b)$$

In the above equation of the second set of the models change in ΔImport nm, t. ΔExport nm, t is taken of the proposed study period. Two digit industry FDI is taken from Pakistan that have linkage to the two digit industry of USA. Whereas the FDI in manufacturing is taken in that comes from the USA to the Pakistan manufacturing industry.

There should noted that both the FDI (FDI *Ind.* m, t-1 FDI *Man* m, t-1) is taken as the lagged value of the proposed study period.

DESCRIPTION OF THE DATA

The data for the research paper has been collected from US census bureau[1] and the WDI mark 2010.[2] Further elaboration of the data is that the Imports and Exports from the US into Pakistan have been collected from the US census Bureau. GDP and Real Effective Exchange Rates have been collected from the WDI 2010.

According to the reports of the USPBC[3] the US government urges U.S. government officials to work with Pakistan to address bilateral trade and investment opportunities. We reviewed the status of negotiations for a United States-Pakistan Bilateral Investment Treaty (BIT)[4]. The Overseas Private Investment Corporation, and U.S. Export-Import Bank, provided an overview of their programs in Pakistan and discussed areas for possible future cooperation.

The Pakistan board of investment identified 15 major companies that attracted some of the largest FDI inflows from the United States of America. There are three major companies that have a huge investment in Pakistan in

[1] http://www.census.gov/ipc/www/idb/
[2] World Bank Data resource. http://data.worldbank.org/indicator
[3] The U.S. Chamber of Commerce and its affiliate the U.S.-Pakistan Business Council
[4] http://www.ustr.gov/about-us/press-office/press-releases/2010/april/joint-statement-us-pakistan-trade-and- investment-cou

the fields of oil and gas development, telecommunications and pharmaceuticals. Pakistan board of investment has indicated that the Pakistan has still a bundle of opportunities and supporting environment like the tax incentive by the Government that can have a large amount of the FDI into Pakistan.

EMPIRICAL FINDINGS

Generalized least square methodology has been used for each set of equation. heteroskedasticity and the auto-correlation have been checked in individual equations. FDI effects on the exports of Pakistan have been shown in (Table 2) in the appendix. Similarly the effect of FDI on imports has been shown in the (Table 1) of the equations.

Total FDI of USA has the positive association with the subsequent imports of Pakistan as it is indicated in the results. The results tell us that the increase in the 10% of FDI from the USA will results an increase in the imports 5.09% from the United States of America or the investing country into Pakistan. The results suggest that the FDI and trade between Pakistan and USA are acting as the complement the β1 estimation is positive but not statistically significant at 5% level of the significance.

Pakistan imports will be reduced if the Pakistan's RER of Pakistani rupee and is depreciated and also reduced in the GDP.

Equation 2(a) of the model FDI in industry has the negative and not significant statistically (Table 1). However, the FDI in the manufacturing is positive and also not significantly statistically. The other macro-economic factors such as RER and GDP have the positive sign (Table 2).

When we consider the (Table 2) the estimation is also the same qualitatively when we compare the FDI on the exports of Pakistan. There is the positive relationship between FDI and exports of Pakistan and the macro-economic variables such as the RER and GDP have the correct sign in the results obtained from the proposed model of equation. The FDI has the positive sign in both industry and manufacturing sector. There is a positive sign for the other macroeconomic factor Real rate of exchange and GDP.

CONCLUSION

The arguments that already been given in the intro-duction are also supported by our empirical results in this research paper. The lack of capital and the comparative advantage that enjoys the host country (Pakistan).there is needed to be capital investment in the host country to utilize these advantages. As result there is the increase in the vertical Multinational enterprises (MNEs), and these MNEs have the opposite effects. If Pakistan has lack of capital then Pakistan imports & exports both will be eroded. If we consider that Pakistan has the comparative advantage of manufacturing then the exports of Pakistan will be enhanced. However if we consider the first situation the lack of capital then there is negative effect on the imports at specific product level or at the industry level of the host country and this negative effect on the Pakistani's exports at aggregative level to highest

FDI in the manufacturing sector of Pakistan will affect the imports of particular goods and the exports of that output. The FDI on the exports have the positive affect if we consider that there is a presence of comparative advantage in the host country Pakistan to that specific product or industry like Oil and Gas development the telecom sector and in the food.

The third situation that is given in the introduction is the demand driven FDI and it applies to the relation and assistance of US to Pakistan. The economy wide FDI acts as complementary for the imports of the Pakistan as the theoretical discussions indicate. There is also a clear a complementary effect on the exports of the Pakistan to USA for the both FDI as economy wide and industry wise. Lack of capital , and the competitiveness in oil and gas development facilities for the foreign firms in Pakistan. There is significantly and positive sign of USA affiliates that are working in the Pakistan. Indirectly we are able to describe that the importance of inter-firm relations and the business ethics in Pakistan. If the trade cost between Pakistan and USA is also consider along with the sum of bilateral trade then there may some change in the results of the study.

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