Impact of Foreign Capital Inflows (FCI) On Economic Growth in Pakistan [1975-2004]

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Abstract: *The Two-Gap Model suggests that the Poor countries have to rely on the foreign capital inflows (FCI) to fill the two Gaps: Import-Export Gap and the Savings-Investment Gap. There are many forms of the foreign capital inflows like FDI (Foreign Direct Investment), External loans & Credit, technical assistance, Project & non-project aid etc. So, UDC's (including Pakistan) have to rely on the Foreign aid, Foreign Debts, FDI and portfolio investments. The role of these external resources (FCI) always remains questionable. This paper analyzes the impact of the foreign capital inflow on GDP Growth in Pakistan during 1975-2004.*

Keywords:

Foreign capital inflows (FCI), Foreign Investment, Economic Growth, Foreign Economic Assistance, Official Development Assistance (ODA), Foreign Direct Investment (FDI). Foreign Debt Burden, Aid and Growth, FCI Effectiveness.

I - INTRODUCTION

The Harrod – Domar Model suggests that the saving (as well as investment) rates must be between 18% – 20 % to sustain the 6% growth of GDP. But mostly the UDC are entrapped by the vicious circle of poverty. They already lack the capital resources and the incomes of the people are very low. Because of low incomes, the saving ratios also remain low, resulting in low investment levels. At the same time, due to low income the taxable capacity remains lower, i.e. government earnings also remain low. In such situations, the UDCs have to face saving-investment deficit as well as the deficit in balance of payments (BOP). The Two-Gap Model and Solow growth model suggest that the developing countries have to rely on the foreign capital inflows (FCI) to fill these two gaps: the import-export gap and the saving-investment gap.

Regardless of the fact that all the UDCs need FCI for their development, the amount and the form of the foreign economic assistance differs from country to country. The country size and the economic circumstances of the country are the major determinants of the volume and the form of the FCI. For instance, the LDCs (Least Developed Countries) of the Africa have been relying on the foreign aid, while the developing countries of the

East-Asia are largest beneficiary of the Foreign Direct Investment (FDI).

In case of Pakistan, the foreign capital inflow has a significant role for the country's economic development. The trends and the patterns have shown that the Foreign aid, Official Development Assistance, Official Aid, FDI, Foreign Portfolio Investment and borrowing through private sources have increased sharply. Pakistan lacks physical, financial & human capital as well as political & macroeconomic stability. So, Pakistan has to rely on FCI.

The need of foreign capital inflows (FCI) can be justified on the following grounds: Firstly, the main argument is "Two-Gap Model", that is, deficits in BOP and deficit in savings is major argument in favour of FCI as described earlier. Secondly, the external assistance (FCI) is also assumed to facilitate and accelerate the process of development by generating additional domestic savings as a result of the higher growth rates (that is presumed to be induced by the accurate utilization of FCI). Eventually, it is hoped that the need for the FCI will disappear as local resources become able to make development self-sustaining.

Thirdly, the financial assistance needs to be supplemented by the technical assistance in the form of high-level worker transfer to ensure that the foreign funds are utilized most efficiently to generate economic growth. This Labor-Gap-Filling process is thus becomes similar to the Financial-Gap-Filling process. Finally, the amount of FCI should be determined by the recipient country's Absorptive Capacity [1]. Typically the donor countries decide which LDC is to receive the aid, how much, in what form, for what purpose and under what conditions on the basis of the their donor countries' assessment of LDC's absorptive capacity.

The main objective of this paper is to analyze the effectiveness and impact of the foreign capital inflows (FCI) on GDP growth of Pakistan. The organization of this paper follows as: a detailed survey of the related literature on this topic is presented in next section (Section – II). The section – III deals with the data and methodology. Empirical analysis and estimated results are analyzed in Section – IV, while the last section – V gives the conclusion and the policy recommendations.

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[1] The term '*Absorptive Capacity*' is defined as "the ability of a country to absorb the foreign assistance to use the funds in a wisely and productive manners" (Todaro, 2001) [01]

II – REVIEW OF LITERATURE

The role of foreign economic assistance in economic development and growth remains contentious in economic literature. Some studies proved its positive impact on the economic development empirically, while some studies highlighted its negative effects as well. As Chenery and Strout (1966) concluded, on the basis of empirical evidence from LDCs, that foreign capital has a positive effect on the economic growth. Afterwards some other studies also argued that foreign economic assistance stimulate the economic growth.[02]

North (1956) found that foreign capital played the important role in directing real resources into the needed social overhead investment and of sustaining an import surplus of consumer and capital goods that helped in the period of development.[03] Bosworth, Collins and Reinhart (1999) applied a regression analysis on sample of developing economies to analyze the effectiveness of various forms of the FCI and found that FDI has a strong positive impact on domestic savings and investments than other form of FCI like loans, portfolio investment and borrowings and some of these forms of FCI have negative impact on domestic savings and investment.[04]

However, some other economists like Leff (1969) [05] and Griffin (1970) [06] have analyzed its negative impacts on growth. They argued that the foreign capital could adversely affect the economic growth by substituting the domestic savings. So, the literature on effectiveness of foreign aid shows both, positive as well as the negative effects, of foreign aid on the economic development. Hansen and Tarp (2000) run a regression between aid and the growth. [07] It is shown that aid increases the growth rate, and this result is not conditional on 'good' policy. There are, however, decreasing returns to aid, and the estimated effectiveness of aid is highly sensitive to the choice of estimator and the set of control variables. When investment and human capital are controlled for, no positive effect of aid is found. Yet, aid continues to impact on growth via investment. We conclude by stressing the need for more theoretical work before this kind of cross-country regressions are used for policy purposes.

Burnside and Dollar have constructed an index of three policies (on fiscal surplus, inflation, and trade openness), interact it with foreign aid, and instrument for both aid and aid interacted with policies.[08] They find that aid has a positive impact on growth in developing countries with good fiscal, monetary, and trade policies. In the presence of poor policies, on the other hand, aid has no positive effect on growth.

The role of foreign aid varies from country to country. Pakistan has been relying on the foreign aid to support its development programs since independence. And the aid still has a larger proportion in the foreign capital inflows to Pakistan. In Pakistan, several economists have tried to find out the role of foreign aid in economic development of Pakistan. As, Shabbir & Mahmood (1992) [09] and Khan & Rahim (1993) [10] concluded that the aid has accelerated the rate of growth of GDP. Aslam (1987) examined that the public FCI did not affect the domestic investment significantly, while the private FCI covered the domestic saving-investment gap. [11]

Some other studies were carried out to analyze the impact of FCI on savings in Pakistan. Khan, Hasan and Malik (1992) estimated that the FCI caused to decline national savings in Pakistan during the period of 1959-60 to 1987-88[12]. Shabbir and Mahmood (1992) also found the negative impact of foreign capital on the national savings in Pakistan for the same period [13]. Mahmood (1997) found that country may caught in a sever debt problems due to macroeconomic mismanagement, misutilization of foreign aid and inappropriate policies [14].

Khan (1993) concluded that foreign aid has played an extremely important role in influencing the pace of development, especially investments and imports have to a large extent depended upon the amount of foreign aid [15]. However, this dependence on foreign aid, on the other hand, has led to the emergence of rising debt burden.

In short, we can conclude on the review of the above literature that foreign capital has stimulated the economic growth on one hand and has substituted the domestic savings on the other hand. And it caused a severe debt serving problems in Pakistan. Accordingly, FCI has a positive impact on growth in developing countries with good policies. In the presence of poor policies, on the other hand, FCI has no positive effect on growth.

III – DATA AND METHODOLOGY

Different types of studies were under taken in order to understand the impacts of foreign capital inflows (FCIs) on the economic growth. And the different methods and variables were used to analyze the role of foreign Capital Inflow in economic development. Some studies focused on the impacts of FCI on the domestic savings, investments and capital formation, while some other researcher paid much attention to study the impact of FCI on the debt burden, GDP growth etc. Some other studies focused upon the impact of FCI on the different sectors of the economy like the agricultural sector, energy and the industrial sectors, social sectors (like health and education etc.).

It is difficult to analyze the effect of foreign capital inflows on all the sectors and variables in a single paper, and as described earlier in section-I that the major objective of this paper is to analyze the impact of FCI on the GDP Growth in Pakistan.

There are many forms of the FCIs, which includes the grants, loans, foreign direct investment (FDI), Foreign Portfolio Investment, Export Credit, Project/Non-Project

Assistance, Technical Assistance and Emergency Relief etc. But theoretically, the FCI takes two main forms: (1) *Private Foreign Investments* (includes "Foreign Direct Investments –FDI- and "Foreign Portfolio Investments"), (2) *Public and Official Development Assistance – ODA-* (which includes Bilateral and Multilateral Aids, Loans and Grants etc). In this paper it has been chosen three indicators, for the analysis of FCI's impact on the GDP growth in Pakistan, initially. This includes (a) Foreign Direct Investments (FDI) (b) Foreign Portfolio Investment (c) Official Development Assistance (ODA) and Official Aid. But the data on Foreign Portfolio Investment was not available for the whole period of the 1975-2004. So, due to the limited data on the foreign portfolio investments, we will use two variables for representing the FCI i.e. 'Official Development Assistance and Official Aid' [ODA] and 'Foreign Direct Investment' [FDI], while GDP is taken as the dependent variable.

Table 1: Foreign Capital Inflows and GDP in Pakistan [1975-2004]

Years	GDP (Current US$ in Millions)	FDI (Current US$ in Millions)	ODA (Current US$ in Millions)
1975	11340.0	25.0	664.1
1976	13338.5	8.2	1013.9
1977	15126.1	15.2	588.8
1978	17820.1	32.3	635.4
1979	19708.0	58.3	711.1
1980	23689.7	63.6	1183.1
1981	28100.6	108.1	823.1
1982	30726.0	63.8	915.5
1983	28691.9	29.5	727.9
1984	31151.8	55.5	729.4
1985	31144.9	131.4	769.6
1986	31899.1	105.7	916.5
1987	33351.5	129.4	820.2
1988	38472.7	186.5	1355.4
1989	40171.0	210.6	1446.3
1990	40010.4	245.0	1129.3
1991	45452.0	258.0	1371.1
1992	48635.2	336.0	1014.1
1993	51478.4	349.0	1005.4
1994	51894.8	421.0	1605.6
1995	60636.1	723.0	823.8
1996	63320.2	922.0	884.1
1997	62433.3	716.0	596.3
1998	62192.0	506.0	1053.0
1999	62973.9	532.0	732.9
2000	73321.0	308.0	702.8
2001	71496.2	383.0	1948.2
2002	71485.1	823.0	2138.2
2003	82350.0	534.0	1065.7
2004	96114.9	1118.0	1421.0

Source: World Bank Development Indicators: Online Database
http://devdata.worldbank.org/query [16]

Data for these variables is taken from the "World Bank Development Indicators: Online Database"[2] (data shown in Table No. 1). FCI is represented here in terms of ODA and FDI. 'Official Development Assistance and Official Aid' (ODA) consists of disbursements of loans (on concessional terms) and grants by official agencies, by multilateral institutions, and by advanced countries to promote economic development and welfare in developing countries. It also includes loans with a grant element and aid flows from official donors.

[2] World Bank (2005). "World Bank Development Indicators: Online Database". Washington DC: The World Bank. Available at http://devdata.worldbank.org/query

Foreign Direct Investment net inflow (FDI) is the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital.

So, to estimate the impact of FCI on the GDP growth rate in Pakistan a regression will be run between FCI (FDI+ODA) and the GDP data for 20 years (1975-2004). The 'Multiple Linear Regression (with no-intercept) Model' will be used in this paper. The Multiple Linear Regression Model is given as:

$$GDP = \beta_1\, FDI + \beta_2\, ODA + \varepsilon_o \quad \text{---------} \quad \text{(Eq. I)}$$

Here;

GDP = Gross Domestic Product

FDI = Foreign Direct Investment, net inflow

ODA = Official Development Assistance and Official Aid

β_1 = Regression Coefficients (to be estimated) measures how much units of GDP would be changed with a unit change in FDI.

β_2 = Regression Coefficients (to be estimated) measures how much units of GDP would be changed with a unit change in ODA.

ε_0 = Error Term

IV - EMPIRICAL ANALYSIS

The results of the Model (as shown in Eq. No. 1) are estimated as:

$$GDP = 61.407\, FDI + 22.663\, ODA \quad \text{------} \quad \text{(Eq. II)}$$

Other estimated results and statistics are given as under:

Table 2: 'Goodness of Fit Test'

R	R Square [R^2] [a]	Adjusted R Square	Standard Error [S.E.] of the Estimate
0.971[b]	0.944	0.940	12190.50829

[a] *For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression.*
[b] *Predictors: ODA (In Millions), FDI (in Millions)*

Coefficient of determination (R2) is 0.944 and Adjusted R2 is 0.94. It means that the 94% of variations in the GDP are explained with the help of ODA and FDI i.e. this Multiple Linear Regression Model has high value of R^2.

And standard error of the estimate is 12190.51, while the value of Multiple Coefficient of Correlation is 0.971 (i.e. there is 97% correlation between GDP and FDI & ODA).

Table 3: Overall Significance of the Model (ANOVA/F-Statistic) [a] [b]

Source of Variation	Sum of Squares	df	Mean Square	F Statistic	Sig.
Regression	69772787518.251	2	34886393759.125	234.754	0.000[c]
Residual	4161037783.059	28	148608492.252		
Total	73933825301.310[d]	30			

[a] Dependent Variable: GDP (in Millions)
[b] Multiple Linear Regression through the Origin
[c] Predictors: ODA (In Millions), FDI (in Millions)
[d] This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin.

Table No. 3 shows the overall significance of the model. For this purpose the Analysis of Variance (ANOVA) or F-Test approach is used. The value of the F-Statistic is 234.754 significant at 1% level of Significance (and lower than 1% as shown as 0.000 in the table No. 3). So, using the Multiple Regression (with on-intercept) is statistically significant.

Table 4: Regression Coefficients [(a)] [(b)] of the Model

Variables	Un-standardized Coefficients		Standardized Coefficients	T Statistic	Sig.
	β	Std. Error	Std. β		
FDI (in Millions)	61.407	8.072	0.533	7.607	0.000
ODA (In Millions)	22.663	3.176	0.500	7.136	0.000

[(a)] Dependent Variable: GDP (in Millions)
[(b)] Multiple Linear Regression through the Origin

Let's discuss the regression coefficients of the model now. Table No. 4 shows the β Coefficients of the regression equation-II, their respective level of significance and the standardized coefficients. All the coefficients are significant even at lower than 1% level of significance. The value of the β_1 is 61.407 [3] (and value of the standardized β_1 is 0.533) shows strong positive impact of the FDI on the GDP growth in Pakistan during the period of 1974-2004. And the value of the β_2 is 22.633 [4] (and the value of the standardized β_2 is 0.500) also shows the strong positive impact on the GDP Growth in Pakistan from 1975 to 2004. Therefore, the estimated results of the model demonstrate that that there is a strong positive impact of the FCI on the GDP.

V – CONCLUSION

The current study shows a positive impact of foreign capital inflows on the GDP growth in Pakistan during the period of 1975-2004. Foreign capital has helped in boosting the GDP Growth through structural transformation of the economy, laid foundations of the industrial and agricultural sectors, provided technical assistance, policy advice and modern technology, assisted in overcoming the budget deficits and the BOP deficits and has also funded the projects for the social sector development projects. As the regression analysis of the GDP and the FCI (FDI+ODA) confirms the positive affect of FCI on the GDP i.e. GDP increases as the flow of foreign capital increases. Thus, the overall impact of the aid on the economic development is positive.

The values of the regressions coefficients (β), for both ODA and FDI, are positive. But the value β_1 (both in standardized and unstandardized forms) is higher than the β_2 i.e. the FDI has more powerful and strong positive impact on the GDP growth in Pakistan than the ODA and Official Aid. Therefore, the Foreign Direct Investment (FDI) has more positive impact on the GDP.

Despite this paper is limited to empirical analysis of FCI's impact on GDP (which is positive). But some negative aspect of FCI is also discussed in section – II, as FCI seemed to have substituted for domestic savings, increase debt burden. As the various debt indicators depicts that Pakistan's debt burden increased over time and the country may caught in severe debt servicing problem if the macroeconomic management, foreign trade and domestic saving policies are not designed and implemented appropriately.

The policies are also important in the effectiveness of foreign capital, as the FCI has a more positive impact on growth in with good fiscal, monetary, and trade policies. In the presence of poor policies, on the other hand, FCI has no positive effect on growth.

Accordingly, there is a need of not only good policies but also the implementation of these policies as well as the proper monitoring of the foreign-funded projects is necessary in order to avoid the misutilization and the mismanagement of the foreign capital resources.

Consequently we can say, that the foreign capital may be helpful in boosting economic growth only under the presence of appropriate monetary, fiscal and the trade policies. And much focus of the policies should be on the inflow of FDI and other form of foreign private capital, while the inflow official aid, loans, grants and debts should be minimized.

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[3] Significant at 1% (and even at lower) level of significance
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