

# The Impact of Foreign Capital Inflow on Savings and Investment: The Case of Pakistan

NAHEED ASLAM\*

The paper<sup>1</sup> examines the role of foreign capital in the context of savings and investment for Pakistan for the period of 1963-64 – 1984-85. The question of the impact of foreign capital inflows on domestic resources has assumed primary importance in view of the increasing debt burden and declining concessionality of foreign loans. The data analysis<sup>1</sup>, based on the classification of loans according to rates of interest and terms to maturity, reveals that the terms and conditions of foreign loans have become more stringent over time, i.e. higher interest rates and lower maturity periods. The worsening terms and conditions of external loans have resulted in increasing reverse flow obligations. Debt servicing as a ratio of export earnings and foreign capital inflow has rapidly increased over time. During 1960-61 – 1970-71, debt-servicing obligations could be met from 14.85 percent of foreign assistance or 10.29 percent of our commodity export earnings, whereas during 1980-81 – 1984-85 foreign debt servicing could be financed from 29.63 percent of export earnings or 64.79 percent of foreign assistance. The heavy debt-servicing burden and unfavourable outlook for external finance has made it absolutely essential that foreign capital funds should generate internally the capacity to repay these loans. This could be facilitated if foreign capital inflows augment domestic capital formation efforts. Multiple regression analysis has been used to test the impact of foreign capital inflows on domestic savings and investment. Besides net foreign capital inflow ( $F_k$ ) domestic savings ( $S$ ) are assumed to depend on national income ( $Y$ ), rate of inflation ( $P$ ) and growth rate of income ( $G_y$ ). Investment is specified to be a function of changes in gross national product ( $DGNP$ ), bank credit to the private sector ( $BC$ ) and lagged level of investment ( $I_{t-1}$ ), besides foreign capital inflow ( $F_k$ ).

The results reported in Table 1 show that net aggregate foreign capital exercises a negative influence on domestic savings and is significant at conventional levels. The disaggregation of foreign capital into its components shows that public

\*The author is a Staff Economist at the Pakistan Institute of Development Economics. This is an abridged version of the paper presented in the Fourth Annual General Meeting of PSDE.

<sup>1</sup>The data analysis is presented in the detailed version of the paper.

Table 1

## Regression Results

## Savings Equations

$$1. S_D = -2633 + 0.07 y - 0.72 F_k + 54.44 \dot{p} - 18.75 G_y$$

$$(5.23) \quad (-2.50) \quad (1.30) \quad (-0.24)$$

$$\bar{R}^2 = 0.54, \quad F = 6.94, \quad D.W = 1.26$$

$$2. S_D = -3483 + 1.56 PKI - 1.03 GKI + 0.04 y + 51.71 \dot{p} - 16.51 Gy$$

$$(1.28) \quad (-3.74) \quad (2.17) \quad (1.62) \quad (-0.25)$$

$$\bar{R}^2 = 0.67, \quad F = 9.31, \quad D.W = 1.99$$

Investment Equations<sup>a</sup>

$$1. I = 805 + 0.12 F_k + 0.04 DGNP + 0.71 BC$$

$$(0.69) \quad (0.37) \quad (5.11)$$

$$\bar{R}^2 = 0.63, \quad F = 11.63, \quad D.W = 1.25$$

$$2. I = 3718 + 5.28 PKI - 0.09 GKI + 0.47 DGNP$$

$$(3.78) \quad (-0.26) \quad (1.91)$$

$$\bar{R}^2 = 0.72, \quad F = 17.99, \quad D.W = 1.73$$

$$3. I = 569.81 + 1.76 PKI - 0.11 (GKI + 0.39 DGNP + 0.64 BC$$

$$(2.02) \quad (-0.56) \quad (0.03) \quad (4.97)$$

$$\bar{R}^2 = 0.69, \quad F = 11.46, \quad D.W = 1.46$$

$$4. I = 710.03 + 0.16 FK + 0.09 DGNP + 0.16 BC + 0.84 I_{t-1}$$

$$(1.20) \quad (0.75) \quad (1.25) \quad (4.85)$$

$$\bar{R}^2 = 0.94, \quad F = 74.54, \quad D.W = 1.83$$

$$5. I = 171.34 + 2.25 PKI + 0.02 GKI + 0.02 DGNP + 0.03 BC + 5.90 I_{t-1}$$

$$(3.66) \quad (0.13) \quad (0.18) \quad (0.29) \quad (5.90)$$

$$\bar{R}^2 = 0.97, \quad F = 136.68, \quad D.W = 2.18$$

Notes: *t*-values are given in parentheses.

<sup>a</sup>All the equations are estimated in linear form.

capital inflow (*GKI*) exerts a negative effect on savings and is significant at conventional levels implying that it has substituted for domestic savings. Private capital inflow (*PKI*) is neutral in this respect. As expected, national income exercises a positive and significant effect on domestic savings. The growth rate is insignificant at conventional levels. The inflation rate exerts a positive influence on savings and is significant at the 10 percent level.

For the savings equations reported, the explained variation is reasonably high. The *D.W.* statistic lies in the inconclusive range for Equation 1, whereas for Equation 2, it shows the absence of serial correlation.

Net aggregate foreign capital is insignificant at conventional levels in the investment equations. However, the results based on the disaggregated version of foreign capital inflow show that private capital inflow exercises a complementary effect on investment whereas public capital inflow plays no significant role in increasing investment. However, further disaggregating public capital inflow into project aid (*PA*), which is primarily meant to increase the productive capacity of the economy and programme aid (*NPA*) shows that project<sup>2</sup> aid is significantly related with investment, whereas programme aid is insignificant. Further, bank credit exerts a positive and highly significant influence on investment. However, it becomes insignificant in the presence of the lagged level of investment, a result well expected, since the lagged level of investment itself may be related to bank credit.

For all the investment equations, adjusted  $\bar{R}^2$  is high and is significant at the 1 percent level. The *D.W.* statistic lies in the inclusive range for Equations 1 and 3, for the rest of the equations, it shows the absence of serial correlation.

The major policy implications which emerge from the paper are as follows. The worsening terms and conditions of external loans, resulting in a deteriorating debt-servicing situation, call for foreign assistance on soft terms and also require that external funds should supplement and enhance the domestic capital formation efforts in order to generate a surplus to repay these loans. Specifically, emphasis should be placed on minimising consumption leakages and maximising the utilisation of these funds for productive investment purposes. Another important finding of the analysis is that credit availability exercises a significant effect on investment. This result has implications for the credit policy of the government as the squeeze in credit creation can lead to a reduction in investment.

$$^2I = 648.84 + 1.39 PA + 0.14 NPA + 1.92 PKI + 0.09 DGNP + 0.38 BC$$

(2.42)      (0.45)      (2.59)      (0.55)      (3.20)

$$\bar{R}^2 = 0.88, D.W. = 1.72$$