CHAPTER 7

Summary and Conclusions

The major aim of this study has been to examine empirically:

(i) the role of foreign capital, more particularly, foreign direct investment, as determinant of the behaviour of growth and savings; and

(ii) the determinants of foreign direct investment, in a developing country like India.

In this chapter, we present a brief summary of our methodological approach, major findings and their policy implications.

1. A brief Summary of the Methodology

The present study is essentially a time series study. The study uses data on the Indian Economy for a 25-year period, from 1955-56 to 1979-80. The choice of the time period is in line with the availability of data.

In the process of developing our analysis, we have also estimated single equation model for savings and growth, despite our emphasis on the simultaneous equations approach. The main justifications for reporting single
equation regressions are:

(i) the specifications of our single equation relationships are more appropriate than those of previous studies in the literature;

(ii) these estimates allow us to compare our results of the previous studies;

(iii) the single equation models also allow us to compare the results with our own simultaneous equation results and finally,

(iv) we have been able to provide estimates based on far more disaggregated samples. Following Papanek, we have decomposed the aggregate foreign capital into two parts, i.e. foreign aid (AID) and foreign direct investment (FDI).

Given our reservations about single equation models, we have specified and estimated a simultaneous equations model in which both the savings rate and the growth rate are jointly determined. This approach is more appropriate given our knowledge from the theoretical and empirical literature which suggests that savings and growth rate affect each other. In other words, savings is a positive function of growth and at same time growth is also a positive function of savings. Foreign capital appears as an explanatory variable in both the equations of our
model, although the direction in which foreign capital affects savings may be different than its effect on growth.

Using the simultaneous equations model, we have shown that foreign capital affects savings and growth both directly, as in the single equation model, but also indirectly, because of the interdependence between savings and growth. We have further shown that the total effect, which consists of both the direct and the indirect effects, may be different from the direct effect both in terms of the magnitude, and sometimes even more significant, in terms of direction, i.e. the sign of total and the direct effects may be quite opposite.

In estimating the simultaneous equation model, we have again disaggregated foreign capital into foreign aid (AID) and foreign direct investment (FDI).

In order to examine empirically the determinants of foreign direct investment, we have specified and estimated a single equation politico-economic model in which the foreign direct investment is made dependent on economic and political variables. This is so because the available empirical studies on the determinants of foreign direct investment indicate that foreign direct investment in a country is a function of both economic as well as political variables.
2. Summary of the Main Findings

In this section, we summarize our main findings from both the models of our study.

On the basis of our results from the single and simultaneous equations models, we have found that the domestic savings as well as foreign capital (AID & FDI) make positive contribution to growth and the former is relatively more important in terms of the statistical significance of the coefficient estimates, than the latter. In the context of the single equation model, we have also observed that domestic savings retains its positive contribution to growth, which is not unambiguously true for foreign capital inflows. The overall regression results (both single and simultaneous equation results) suggest that while foreign capital is still useful, more emphasis should be given to mobilize resources from domestic sources.

Given our observation that foreign capital has positive role to play and that foreign capital will still continue to play an important role in the Indian economy in the near future, we have investigated the relative effectiveness of different types of foreign capital inflows as domestic growth. In this respect, we have examined the sensitivity of the coefficient estimates with respect to method of estimation, e.g. single versus simultaneous equation method.
We first consider the impact of foreign aid and foreign direct investment. In terms of direct effect, foreign aid has positive contribution while the contribution of foreign direct investment is negative. In terms of total effect, both foreign aid and foreign direct investment make a positive contribution to economic growth. We conclude that the single equation models used in the previous studies tend to overestimate the effect of foreign capital on growth because of these models' failure to capture the indirect negative effect of the relevant foreign capital on growth via this negative impact on domestic savings.

Turning now to the ranking of the different types of foreign capital, the results of the single equation and the simultaneous equations models are not fully in agreement. Using single equation estimates, we have found that foreign aid is more productive than foreign direct investment and the estimated coefficient of foreign direct investment is negative. But this ranking reverses when we consider the total effect derived from the coefficients. Here, we found that the positive effect of foreign direct investment was larger than that of foreign aid. For further analysis, when the foreign capital inflows are lagged 2 years, the magnitude and the statistical significance of the estimated coefficients are affected. When the foreign capital is lagged 1 year, the magnitude
and that values relating to the estimated coefficients increase. While the estimated coefficient of foreign aid is positive, the estimated coefficient of foreign direct investment becomes positive and is larger than that of foreign aid. The results do not show any improvement when the foreign capital is lagged 2 years. Thus, the ranking based on direct and total effects leads us to conclude that foreign direct investment is more useful than the foreign aid. The result is not surprising because foreign direct investment, in search of profits, goes directly into profit producing, and therefore, directly productive activities (DPA), while foreign aid, in addition to being politically determined as to its volume and direction, goes into the formation of social overhead capital (SOC) rather than DPA.

Let us now consider the relative effects of different types of foreign capital inflows on domestic savings. The empirical results in this case are more ambiguous than those for growth. The results (in terms of sign, magnitude and the statistical significance of the coefficient estimates) are much more sensitive to estimation methods. First, we consider the results of the single equation model. The estimated coefficients of foreign aid and foreign direct investment are negative and statistically significant. For further analysis, when the foreign capital inflows are lagged, the magnitude and the
statistical significance of the estimated coefficients are affected. When the foreign capital is lagged 1 year, the magnitude of the coefficient of foreign aid declines while that of foreign direct investment increases, but the negative sign of the coefficients remains intact. When the lag is of 2 years, the coefficient of foreign aid, though still negative, becomes statistically insignificant, while the estimated coefficient of foreign direct investment, though still negative, becomes statistically more significant (at 5% level). Thus our study leads to the conclusion that foreign capital has a negative impact on domestic savings in India.

We now return to the results of simultaneous equations models and the comparison of respective direct and indirect effects. The results show that the estimated coefficients of foreign aid and foreign direct investment are negative and statistically significant (at 10% level). These results tend to support our earlier conclusion regarding negative impact of foreign capital on domestic savings in the single equation framework. The negative impact of foreign capital inflows on domestic savings in India tends to support the so called "decapitalization thesis". In other words, FDI seems to have crowded out domestic savings in India. This, however, cannot necessarily be interpreted as a weakening of the development effort by the Government of India. It may simply reflect the fact that a proportion of foreign
capital is consumed. In our case, it might suggest the consumption of a part of foreign capital and the relaxation of the saving efforts by the Government of India with the receipt of foreign capital.

With regard to ranking, i.e. the relative adverse effect of different types of foreign capital on domestic savings, the results of the single and simultaneous models are in agreement. This result is unlike we have obtained with respect to the impact on growth. From single equation results we have found that foreign direct investment has greater adverse effect on savings than foreign aid. This result holds in terms of the sign and the statistical significance of the estimated coefficients. The results based on total effects (from the reduced from coefficients) show that it is the foreign direct investment which has greater adverse effect on savings than foreign aid, in terms of sign, magnitude and statistical significance of the estimated coefficients. These results sound plausible because foreign capital, more particularly, foreign aid, is negotiated on a Government to Government basis and it is quite likely that the Government of the recipient country may tend to relax its efforts to mobilize resources internally once it has found large commitments of foreign aid from external sources. Also, foreign direct investment, more than foreign aid, could distort the pattern of investment in
favour of conspicuous consumption, thus reducing the savings rate to a greater extent.

As regards the empirical examination of the determinants of foreign direct investment in India is concerned, our results show that the inflow of foreign direct investment in India is determined simultaneously by a complex set of economic and political factors. The most important economic determinant seems to be the balance of payments. The lower the balance of payment deficit, the more foreign direct investment is attracted. Among the other economic determinants, the growth rate of GNP and the rate of inflation, have coefficients with theoretically opposite signs and statistically insignificant, which suggests that an improvement of economic conditions reduces foreign direct investment inflow. The coefficient of wage is negative as expected but statistically insignificant. Among the political determinants, the political instability has the strong negative effect, suggesting a reduction of the foreign direct investment inflow. Another relevant factor is the amount of bilateral aid coming from western countries, which has a strong stimulating effect on foreign direct investment.

3. Policy Implications

We now present some of the implications of our main findings.
The most important one is that, although foreign capital has a positive role to play, capital accumulation from internal sources remains by far the most significant determinant of growth in India. Consequently, if India wishes to achieve rapid economic growth, maximum efforts will have to be directed towards raising domestic saving rate, increasing the productivity of labour force and improving export performance. These tasks may involve difficult choices and necessitate tough and even unpleasant policies, but there is no escaping the fact that reliance on foreign capital does not offer the solution for high and rapid economic growth.

While India will continue to accept foreign capital, e.g., in those critical areas where domestic resources do not provide an adequate substitute, India should be careful in deciding about the type of foreign capital it will encourage more. Given the sluggish trend of official development assistance (foreign aid) and its political overtones and a sharp fall in the volume of commercial bank lending, the real choice falls on foreign direct investment, which incidentally is in line with our finding. India has a huge potential for attracting foreign direct investment. It follows from the fact that it has a large domestic market, estimated to be consisting of 150 million people, and which is expected to grow further over the years; a vibrant capital market which is open to foreign companies also; a huge reservoir of trained,
skilled and relatively inexpensive manpower; a well developed infrastructural and industrial base; and, the availability of a wide variety of natural resources. In order to attract more foreign direct investment, India will have to reduce the deficit on its balance of payments and political instability, which is quite compatible with our results. The recent liberalization of the economy and the new "open door" foreign investment policy of the Government of India, are steps in the right direction. These measures will go a long way in upgrading technology, integrating Indian economy to the global economy and bring in non-debt external resources. This is also in harmony with North's emphasis on self-help procedures based on trade and exchange liberalization and policies to attract foreign direct investment.