

The Effectiveness of IMF Conditionality in Non-Oil Developing Countries: An Empirical Verification *

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I. Introduction

Policies related to the use of International Monetary Fund (IMF) resources, known as its conditionality, have been a subject of much debate in recent years. The Fund has been accused of adopting a doctrinaire monetarist approach and being insensitive to the individual situations of borrowing countries, of imposing unreasonably onerous conditions, of being ideologically biased against socialism and in favor of free markets, and even of perpetuating dependency. It has also been criticized for being too concerned about short run solutions and too anxious to achieve quick results. Alejandro (1981) and Taylor (1981) have criticized IMF conditionality on both theoretical and empirical grounds. According to Alejandro (1983), the IMF conditionality in the Southern Cone resulted in a large capital inflow in response to a high domestic interest rate, higher inflation and a greater external debt. Green (1983) and Killick (1983) have indicated limited success of the IMF policy prescriptions in Kenya and Tanzania. Both authors asserted that this conclusion can be generalized for the whole relationship of the Fund to Sub-Saharan Africa. IMF conditionality also failed in Jamaica in 1978-79 (Sharpley, 1983).

There is also some evidence on the success of IMF condi-

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** The author is grateful to Mohsin S. Khan, Manuel Guitian, Gerard Belanquer and other Staff members of the International Monetary Fund and his colleague Robert C. Shelburne for their valuable comments on an earlier draft of this paper.

domestic interest rate, the real exchange rate, the domestic credit, and the government deficit as a proportion of nominal GNP.

The organization of the paper is as follows: Section II discusses IMF conditionality; Section III presents the theoretical model and analyzes the empirical results; and Section IV briefly summarizes the results and conclusions.

At the outset it is important to mention certain areas that the paper does not cover, even though they are closely related to the subject at hand: the income distribution effect of IMF conditionality, the origin or the proximate cause of disequilibrium, the impact of changes in international circumstances on balance of payments and hence on demand for loans while the country is undergoing an adjustment process, and finally due to lack of public data the paper does not distinguish between "high" and "low" conditionality.

II. IMF Conditionality

The Fund conditionality is primarily concerned with macroeconomic variables relating to monetary, fiscal and exchange policy. Until recently, balance of payments difficulties were associated with the prevalence of excess demand pressures. Therefore, the policy objectives of conditionality were controlling the level or the rate of growth of domestic aggregate demand, and lowering the rate of inflation. The Fund has changed its procedures in the light of recent events which called for attention to complementary measures aimed at bringing an efficient utilization of resources to strengthen domestic productive capacity (Guitian, 1981). The main features of the IMF stabilization program are a devaluation of the domestic currency, a reduction in the ratio of government deficit to GNP, a contraction in the rate of growth of domestic credit, and an increase in the real interest rate.

A. Exchange Rate Devaluation

Devaluation is designed to bring about a more meaningful balance between production and absorption. It tends to shift resources away from production of non-tradables into production

devaluation are not subsequently offset. To reduce absorption, the Fund prescribes that the borrowing countries initiate measures to reduce the share of government deficits in the GNP.

There is substantial evidence suggesting that the government deficit has played a significant role in domestic inflation and in the balance of payments disequilibrium of developing countries. Khan and Knight (1983) and Dorrodian (1985) indicated that one of factors that led non-oil developing countries to experience huge deficits in their current accounts during the 1970's was the increasing share of the government deficit relative to GNP. Based on a study by Donovan (1982), Kelly (1982) investigated the extent to which reduction in the balance of payments deficits in program countries resulted from adjustments in the government's financial position as opposed to adjustments in the rest of the economy. The empirical results indicated that, at least for some countries, changes in fiscal deficits have little effect on the rest of the economy and are fully reflected in changes in the current account. Dutton (1971), Aghevli and Khan (1977), and Tanzi (1978) have shown that growing fiscal deficits led to selfgenerating inflation in Argentina and Indonesia. Aghevli and Khan concluded that the results of their study of Indonesia have important implications for other countries that resort to deficit financing. They stress that the selfperpetuating process of inflation, resulting from budget deficits, could easily lead to hyperinflation causing serious economic as well as political instability.¹

C. Reducing the Rate of Growth of Domestic Credit

The orthodox stabilization theory emphasizes excessive money creation as a source of inflation (for a more detailed explanation of this theory see Cline and Chapter 9 of Williamson, 1983 and also Polak, 1957). The theory suggests that any expansion in money supply eventually leaks abroad through balance of payments deficits and reserve losses. Substantial work has been done on the links between monetary growth and inflation (Vogel, 1974; Aghevli and Khan, 1978; Harberger, 1978; and Khan, 1980) and

¹ It should be mentioned, however, that the inflationary pressures of government deficits are stronger in developing countries than in advanced nations. In the absence of organized capital markets, money creation may be necessary to finance the government deficit.

for which the relevant data are available.² The required data were obtained as follows: the IMF provided the largest amounts for borrowings during 1976-77. Consequently, this period was chosen as the base period. The changes in the independent variables (shown below) were calculated for a three-year interval from the base period.

The basic equation considered here has the following form:

$$UFB/M = a_0 + a_1 RC + a_2 (FP/GNP)C + a_3 RIRC + a_4 MSC + e$$
 where:

$$RC = FC - (CPIC - WCPIC)$$

$$RIR = (NIR - CPIC)$$

The definition of variables are as follows:

- UFB = Use of fund credit during 1979/1980, depending on whether the base year for the home country is 1976 or 1977, in U.S. dollars;
- M = Nominal imports of the home country during 1979/1980, in U.S. dollars;
- R = Real dollar price of domestic currency;
- E = Nominal dollar price of domestic currency;
- CPI = Consumer price index of the home country, 1980 = 100;
- WCPI = Consumer price index in industrial countries (a proxy for foreign price level), 1980 = 100;
- FP = Fiscal position (revenues - expenditures), in domestic currency;
- GNP = Gross domestic product of the home country, in domestic currency;
- NIR = Nominal domestic interest rate measured by discount rate;
- RIR = Real domestic interest rate;
- MS = Domestic money supply measured by M_1 definition of money;
- e = error term.

² These 34 countries are Bangladesh, Bolivia, Cameroon, Chile, Costa Rica, Cyprus, Dominican Republic, Egypt, Greece, Guyana, Haiti, Israel, Jamaica, Kenya, Korea, Malawi, Mexico, Morocco, Nepal, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Portugal, Senegal, Sri Lanka, Sudan, Tanzania, Thailand, Turkey, Yugoslavia, Zaire, and Zambia.

that devaluation can shift resources away from production of non-tradables into tradables and consumption from tradables to non-tradables. This would lower the demand for imports and increase the supply of exports which would eventually lead to an improvement in balances of payments and less demand for loans. The estimate indirectly supports the argument that the demand for exports and imports of developing nations are price elastic. This result suggests that each one percent of real devaluation at time t would cause the demand for the fund resources as a proportion of imports to decrease by 0.191 percentage point at time $t + 3$. These findings also support the IMF orthodox stabilization policy in that the main cause of balance of payment disequilibrium is excessive domestic expenditures which result in a rapid rise in the domestic rate of inflation and a fall in domestic capital formation. Therefore, the borrowing country should implement demand management policies to reduce absorption domestic investment to bring about a more meaningful balance between production and consumption. The statistical results indicated that an increase of one percent in the real domestic interest rate or a reduction of one percentage in the ratio of fiscal deficits to GNP would lead, on average, to a decline of 0.288 percent and 0.044 percent in the UFB ratios, respectively. Finally, the statistically significant coefficient on domestic credit growth rate confirms the view that a rapid rise in the money supply leaks abroad through balance of payments deficits. This in turn would result in more demand for the IMF loans. An increase of one percentage point in the domestic credit growth rate would increase the UFB as a percentage of imports by 0.061. In countries that experienced a rapid growth rate in domestic money supply, the impact of the reduction in the rate of increase by domestic credit on demand for the Fund's resources is less significant, perhaps because of the severe economic distortions that are caused by hyperinflation. As a result, a one percent reduction in the growth rate of domestic credit will not have much of an impact on the demand for loans.

As the units of measurement differ for the variables, an alternative way of ascertaining the relative importance of the factors under consideration is to calculate the beta coefficients.⁴ The beta

⁴ As is well known, beta coefficients measure the change in the explained variable (in standard-deviation units) for a unit change in each explanatory variable (also expressed in standard deviation-units), holding all other variables constant.

IV. Conclusions

This paper attempted to assess the effectiveness of International Monetary Fund stabilization program, which has come under much debate in recent years. It examined empirically the relationship between the policy prescriptions imposed by the Fund on borrowing countries at time t and the demand for loans at time $t + 3$. The empirical results supported the hypothesis that a reduction in the rate of increase in domestic credit, a devaluation of the domestic currency, an increase in the real interest rate, and a reduction in the ratio of government deficits to GNP are the relevant policy tools for solving a balance of payments problem. These findings also confirmed results obtained by Donovan (1982) and Kelly (1982) and are in line with the Cline (1983) argument that countries should not wait too long to reach an agreement with the Fund. Cline's study on the Peruvian stabilization program in 1975-78 showed that delay in concluding an agreement with the Fund could create a crisis of large proportions. The results of the present study have also indicated that, regardless of the origin of disequilibrium and given that the balance of payments difficulties are not self-reversing, the countries with balance of payments problems should initiate an adjustment of the basic supply and demand in the economy.

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