IMF Stabilization Programs, Policy Conduct and Macroeconomic Outcomes: A Case Study of Pakistan

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Abstract

This study is designed to assess the macroeconomic performance of fund-supported programs, and the sequencing and ordering of macroeconomic policies in the context of the Pakistan economy. The generalized evaluation estimator technique has been used to assess the macroeconomic impacts of the IMF supported programs. GDP growth, inflation rate, current account balance, fiscal balance and unemployment are used as the target variables in order to gauge economic performance during the program years. The vector of policy variables (that might have been adopted in the absence of programs) and the vector of foreign exogenous variables are also taken as explanatory variables in the model, so that the individual effect of the IMF supported programs could be assessed. The result suggests that as the IMF prescriptions were applied, the current account balance has worsened, the unemployment rate has significantly increased, and the inflation rate has increased during the years of fund-supported programs. Only the budget balance has shown signs of improvement. Furthermore an inadequate sequencing of reforms has contributed to the further worsening of the economic scenario during the program period.

Introduction

Stabilization policy can be defined as the policy response to correct macroeconomic imbalances when an economy is off track from its potential growth. The general goals of stabilization policy are: a) stable growth rate b) stable price level and c) high level of employment (low unemployment). There are no conflicts over the goals of the stabilization policy but conflicts arise over the ways these objectives are achieved. The International Monetary Fund provides funds to the member country when it faces balance

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of payments problems that cause severe macroeconomic disequilibrium in the economy. Besides, as provided in Article V of the Articles of Agreement of the IMF, it can also impose "adequate safeguards". These "adequate safeguards" take the form of policy packages as conditionalities to the loan. In their practical application over time, these policies produced a three-pronged approach to confront balance of payments problems: (i) securing sustainable external finance (ii) adoption of demand-restraining measures and (iii) implementation of structural reforms. IMF adjustment programs are of two orientations: a) short-term, in which the macroeconomic disequilibrium is thought to be reversible in one or two years, and b) medium-term in which the macroeconomic disequilibrium is caused by structural impediments to growth or a heavy external debt burden. The Standby Arrangement (SBA) is an example of the IMF short-term program. The priority course of action in SBAs is expenditure reduction. IMF medium-term programs aim to correct a serious external payments disequilibrium due to structural impediments to growth and debt overhang. The program involves a strategy that keeps expenditures in line with output and increases growth. Examples of these programs are the Structural Adjustment Facility (SAF), Extended Structural Adjustment Facility (ESAF) and Poverty Reduction and Growth Facility (PRGF).

Pakistan accepted fund supported adjustment programs in the 1980's[1] and has become a prolonged borrower with more than 15 years of borrowing with "Adequate Safeguards". We do not find many studies analyzing the impacts of these "Adequate Safeguards" on the Pakistan economy. Yet there are a few; as Kemal (1994) has shown the employment situation further worsened due to privatization, and structural adjustment has been accompanied with rising inequalities and poverty. "Stabilization and growth are not mutually exclusive and any policy has to incorporate both elements. However, the manner in which the policy has been implemented in Pakistan has tended to pursue stabilization at the expense of growth" is the conclusion of Bengali and Ahmed (2001). Pakistan has been unable to sustain high economic growth with equally impressive reductions in poverty (Khan, 2002). Real output declined, the inflation rate increased, and the exports of goods remained insignificant during the adjustment period 1988 to 1991 but the findings show that adjustment lending enhanced investment and increased the government's current consumption (Iqbal, 1994).

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[1] Pakistan has had a long association with the IMF; it joined the IMF on July11, 1950. The first time when the Government of Pakistan asked for a loan was 1958. As the IMF's funding amount and pattern changed after the 1970's, right after a couple of shocks of oil price and debt crises of 1980's, it was 1988 when Pakistan accepted policy packages suggested by the IMF.

Consequently, this paper is an attempt to analyze the macroeconomic outcomes of the fund- supported programs in the context of the Pakistan economy. The generalized evaluation estimator technique has been used, which is considered to be a better technique than the available ones in the literature of the fund-supported programs (see Methodology), and is a first attempt of its kind in Pakistan. Along with the macroeconomic outcomes due consideration has been given to the sequencing and ordering of the policy conduct that is very important to assure the effectiveness of any program. The success of the programs is measured in terms of the macroeconomic outcomes, but it is not a straightforward task to define the effectiveness of the adjustment programs. It is very easy to check the implementation of those policy changes on which both parties (IMF and country) are mutually agreed upon. But it is much more difficult to know whether these changes will lead to the desired macroeconomic targets at least for two reasons. First, from a theoretical point of view, the fund supported program is the composite of the complex policy packages that include monetary and exchange rate policies, fiscal measures, policies to improve efficiency, trade liberalization, price and wage reforms, privatization and financial sector reforms. The theory underlying the dynamic linkages among such policy packages combining demand management policies with supply enhancing policies and a set of multiple macroeconomic targets is not well established. As Baqir, Ramcharan and Sahay (2003) found by regressing the deviation between the programmed and actual growth on the deviation between programmed and the actual values of the current account, better performance in the current account is accompanied by worse performance in terms of growth. Second, the fund-supported program is only one of the exogenous shocks that hit the economy of the typical country. Other external shocks include changes in the terms of trade, changes in the cost of debt servicing, droughts, famines etc. The Afghan crisis, the incidence of September Eleven, nuclear tests of 1998 and the Iraq war have greater implications on the Pakistan economy.

The paper is organized as Section-I Introduction; Section-II Literature Review; Section-III Methodology and model, Section-IV Results and discussion, Section-V Summary and conclusion.

Literature Review

Being an old addict of fund-supported programs, the Pakistan economy presents a very good case study for analyzing the impact of fund-supported programs. There is not much literature available for the assessment of the fund-supported program of a typical economy. Quite a few studies are available but they also need to be modified in terms of the assessment of the macroeconomic outcomes. There is even more of a lack

of literature about the sequencing and ordering of the policy reforms. Certainly this would be a novelty to bring the sequencing and ordering into the picture while assessing the outcomes of the fund-supported programs and analyzing the macroeconomic impacts of the programs on the Pakistan economy.

Economists of different schools of thought have analyzed the stabilization policy and structural adjustment programs and their impacts on the balance of payments in different ways. Conflict over the results of these fund-supported programs on the macroeconomic variables, especially on balance of payments is there from the very beginning of these programs. Few studies found that these policy reforms work in terms of improving the balance of payments position. As Bagci and Perraudin (1997) found by using a generalized evaluation technique, fund-supported adjustment programs improve the overall balance of payments performance of the countries involved in the programs. Schadler *et.al.* (1993) get the same results using the before after technique and Khan and Knight (1981), (1985) obtain similar conclusions. On the other hand Loxeley (1984), Connors (1979), and Moran (1989) have found that the fund-supported programs have no significant impact on the balance of payments position of those economies that accepted the fund-supported adjustment programs.

Pakistan, like other developing countries, experienced balance of payments deficits throughout the 1980's. Iqbal (1994) finds that in the case of Pakistan output declined due to fund supported programs, the inflation rate increased and exports remained insignificant. "The evaluation of the three-year program shows that the application of the short-term policies to the long-term adjustment problems resulted in a number of policy conflicts. The factor behind the sharp acceleration of the credit and money supply shows that the policy of credit restraint is in direct conflict with the objective of price stabilization in a less developed economy, even when its output constraint is overcome in any period. Similarly, the objective of improving the balance of payments by encouraging exports remained unfulfilled, and the inflationary situation has worsened," Bilquees (1987).

Another important macroeconomic target under consideration is economic growth. Economic growth is a very crucial macroeconomic variable to gauge the economic performance of any country. Do fund supported programs lead to improvement and sustainability in economic growth? This has been a central question in discussing the performance of fund-supported programs. Kiguel and Livatian (1992) find that the programs that use the exchange rate as a main nominal anchor are often associated with a business cycle that begins with boom and ends with recession. While

the programs that use money supply as the main nominal anchor generally induce the usual Philips curve result, lower inflation is accompanied by recession after the program is implemented. Bruno (1992) concludes that recent experiences of IMF-supported programs in Hungary, Poland, Czechoslovakia, Bulgaria and Romania ended with output collapse. Cukierman and Liviatan (1992) show that when the difference in the ability of "strong" and "weak" policy makers to control inflation is large, unexpected inflation may be persistently negative for quite a while, thus causing reduced economic activity and indicating that credibility is low. Uribe (1999) found that exchange rate based (ERB) and money based with initial reliquefication (MBR) programs induce an initial expansion in the economy while the money based (MB) programs are initially contractionary. Balassa (1982) concludes that countries that applied an outward oriented strategy had favorable growth experience after 1973. "If the government adopts public sector price increase combined with tough layoff policy, there is a strong presumption that real output will be higher and inflation would be lower in the overall time horizon," Buffie (1992). The conclusion from Khan and Knight (1981) is that programs designed to achieve quick results on the balance of payments via sharp deflation are likely to have significant and undesirable impacts on output and employment, particularly in the short run. Ball and Sheridan (2003) have concluded that there is no evidence that inflation targeting improves the performance of the economy with regard to output growth. Hutchison (2001), using 461 IMF-stabilization programs and 160 currency crises, found that currency crises, even after controlling for macroeconomic developments, political and regional factors significantly reduced output by 1 to 2 percentage points. Loxley (1984) and Connors (1979) found contractionary effects on output. Baqir *et. al.* (2003) have reported results from regressing the deviation between programmed and actual growth on the deviation between programmed and actual values of the other program objectives that there is a negative and statistically significant relationship between growth and current account objectives. Stiglitz (2000) concludes that IMF economic remedies often make things worse, turning slowdowns into recessions and recessions into depressions.

The Pakistan economy unlike other developing countries enjoyed healthy economic growth during the 80's, averaging above 5% per annum. But after the adoption of fund-supported programs, economic growth started to decline rapidly. As Bengali and Ahmad (2001) have concluded "Stabilization and growth are not mutually exclusive and any policy has to incorporate both the elements. However, the manner in which the policy has been implemented in Pakistan has tended to pursue stabilization at the expense of growth. It has dampened investment and curtailed purchasing

power, leading to a recessionary situation. It has contributed directly to the increase in unemployment and poverty". Monetary growth in Pakistan is to some extent anticipated. There was no evidence that only unanticipated policy has a real output effect, as discussed by Khilji and Leon (1989). Growth contributes more to poverty reduction when it increases employment, productivity and the wages of poor people, and when public resources are spent on human development and physical infrastructure. Pakistan has been unable to sustain high economic growth with equally impressive reductions in poverty, as discussed by Khan (2002).

After the shocks of the 1970's, most developing countries were running fiscal deficits, and their eradication took the focus of attention in adjustment programs. Excess of expenditure over revenues is considered to be the cause of worsening balance of payments deficits and inflation. Bulir and Moon (2003) show that the overall fiscal balance of sampled countries improved in most cases in the 1990's but the impact of IMF supported programs was not statistically significant. Franco (1990) also found that balance of the budget itself is not sufficient to establish that these reforms effectively took place, since inflation affects the budget deficits in various respects, so the influence of price stability on deficits might very well be an important part of the explanation of these sudden budget improvements. In the context of the Pakistan economy, Ahmad (1998) has found that the experience of implementing fund supported reforms reveals that non-fiscal policies have mostly conflicted with fiscal policies in achieving fiscal discipline. At the cost of painful tradeoffs, the fiscal deficit has come down from 7% of GDP in the 1980's to 5.4% of GDP in 1997-98. This reduction in the fiscal deficit seems to have slowed down the growth tempo, which in turn has reduced revenue potentials.

Sequencing of reforms is the order in which either macroeconomic policy actions or specific reforms are introduced. It involves the order in which reforms are undertaken across the different sectors. A distinction in sequences of different reforms is needed among the economies because of the initial differences. In developing countries fiscal, institutional and monetary reforms should be taken first rather than trade reforms, financial reforms and capital account liberalization (Nsouli, Rached and Funke (2002)). Ivanova (2003) concludes that implementation of the program primarily depends upon the borrowing country's political economy. Political instability, strong interest groups, inefficient bureaucracies, lack of political cohesion, and ethno-linguistic divisions weaken program implementation. Mundell (1962) concluded that the countries where employment and balance of payments policies are restricted to monetary policy and fiscal instruments, monetary policy should be reserved for attaining the desired level

of balance of payments, and fiscal policy for preserving internal balances. The opposite system would lead to progressively worsening unemployment and balance of payments situations. "All of the IMF blunders are merely due to committing mistakes in sequencing and pacing. Forcing liberalization before safety nets were put in place, before any adequate regulatory framework and forcing policies that led to job destruction before the essentials for job creation were placed. Forcing privatization before there was adequate competition" is the conclusion by Stiglitz (2002). Alesina and Drazen (1991) found that when stabilization has significant distributional implications (e.g., tax increase to eliminate a large budget deficit), socioeconomic groups might attempt to shift the burden of stabilization on to other groups, resulting in delay in the reforms. Lack of political support can also be a reason for the delay in stabilization (Werner, 1999). Especially when stabilization is a two-stage policy, the government does not know the size of adjustment in the second stage, as discussed by De Gregorio (1993). Though there were mounting problems of indebtedness, macroeconomic imbalances, micro distortions, lack of employment creation, and the need for poverty alleviation, the reforms in Egypt were delayed or not properly implemented due to the interest groups (Richards, 1991).

Adverse external developments and slow implementation of the adjustment measures have left Pakistan's economy short of achieving the original targets and the objectives of the program formulated at the end of 1988. The expected stabilization of key macroeconomic variables has proved difficult to achieve, as shown by Naik (1993). Zaidi (2000) concludes that repercussions have been severe for poverty, employment, wages, and inequality due to fund-supported programs in Pakistan. Moreover, some outcomes of the structural adjustment programs, such as higher growth and lower inflation, have not manifested themselves in Pakistan, with growth considerably low and inflation high. Kemal (1994) has shown that despite containing the employment cost through limiting the wage rate and reducing employment by about 15%, the non development expenditure and fiscal deficit have continued to increase, the employment situation has further worsened due to privatization, and structural adjustment has been accompanied with rising inequalities and poverty in the Pakistan economy. The Gini coefficient increased from 0.34 to 0.41 and the proportion of the poor has increased from 13% in 1987-88 to 14% in 1990-91. Amjad (2004) has concluded that the disaster in terms of economic decision-making during the reform period in Pakistan characterized the financial reform program adopted in the late 1980's. By drastically raising the interest rates to market prices on government borrowing, it increased many fold the interest payment burden of the government.

Methodology

In the literature, five types of approaches for the assessment of the macroeconomic outcomes of fund-supported programs are found as very common:

- **The before-after approach**

It compares the macroeconomic performance of an economy before and after the adoption of fund supported programs[2].

- **The with-without approach**

It compares the macroeconomic outcomes of fund-supported programs by differentiating the program and non-program countries[3].

- **The comparison of simulation approach**

It relies on the simulations of econometric models to infer the hypothetical performance of the policies included in fund supported programs and alternative policy packages[4].

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[2] This is the most popular approach in the early literature of the fund-supported program. The first study to use this was by Riechman and Stillson (1978). It compares the macroeconomic performance before and after the adoption of a fund-supported program, assuming all other things constant. It has the advantage of ease of calculation but whenever the other factors that are assumed constant by this approach affect the macroeconomic position of the economy, it fails. This is because the fund-supported program is one of those exogenous shocks that hit the economic variables. So if there are other factors like terms of trade, industrial growth, movements in the interest rates etc., along with the fund-supported program that affects the economic variables of the country, it produces biased results.

[3] This is another counterfactual approach, which tried to overcome the drawback of the before-after approach. As this takes the panel of the program and non-program countries and assumes that both the program and non-program countries have the same non-program determinants. Ball and Sheridan (2003) and Fisher (1988) use this approach. Though it overcomes the problem of the before-after approach, it also has a few inherent problems. The assumption of the same non-program determinants between the program and non-program countries is quite unrealistic. Because the countries selected are not taken randomly, in fact they are selected for having a poor economic performance prior to the program. This implies that the program countries had a weaker position prior to the program than non-program countries. So macroeconomic determinants between these two groups of countries would not be the same, in this position the with-without approach would produce biased results.

[4] This approach differs from the other three in that it does not consider the actual outcomes of the program but it relies on the econometric model to incorporate the impacts of the fund-supported program. Khan and Knight (1981) and Khan and Knight (1985) have gauged the macroeconomic impacts of the fund-supported program. But this

- **Actual versus targeted approach**

It compares actual outcomes for certain key macroeconomic variables to their respective targets, for such variables specified by the authorities and the fund at the inception of the program[5].

- **The generalized evaluation estimator approach**

It compares the macroeconomic performance of the program and non-program countries, adjusting for the initial differences and condition among the countries and controlling for exogenous influences.

The recognition of the inherent biases in with-without and before-after approaches led to the creation of the generalized evaluation estimator approach. It modifies the with-without approach in two ways. First, it accepts the non-random selection of the countries, and identifies the specific differences between the program and non-program countries in the pre-program period. Second, it attempts to capture the effect of policy, exogenous shocks and other variables on the macroeconomic outcomes, taking into account how policies would have evolved in the absence of the program. The reaction function captures the effect of the policy. The reaction function brings those policies into consideration that might have been adopted in the absence of the program. The reasoning behind the counterfactual approaches is that either they compare the before and after situation in the economy or compare the sample of the program countries with the sample of those countries that are not involved in the program.

At the same time the country cannot be in both situations (program and non-program). Therefore, the reaction function is estimated by taking the difference of the vector of desired values of target variables with the vector of actual values of the target variables in the last period. Second, by

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approach carries a famous Lucas critique that the actual effects can turn out quite different from the simulated ones. Second, due to credibility factors, the effect of the policy can be different when it is implemented inside and outside the fund-supported program.

[5] This is not one of those approaches that are frequently used in the literature of the fund-supported programs. It compares the targets set by the programs for certain variables of interest to the actual outcomes of the program. The drawback of this is that the targets are mostly not available to the public. It is also deficient because targets may be overly ambitious so that failure to achieve them does not necessarily imply that the adjustment program was not effective. Conversely, the targets could be under ambitious so that exceeding them does not always mean that the program was effective.

taking the exogenous shock as an explanatory variable in the model, it provides a good measure for analyzing their impact on the target variables. While applying it to the case study it also overcomes the two well known limitations, selection of random countries, and the problem of the degree of program implementation, i.e. the willingness of governments to implement certain programs. Second, technically the methodology used in this study overcomes the problems associated with the with-without, before after and the other above discussed techniques, so the IMF estimator estimated with this technique would not provide biased results. That is why it is known as the comparatively better technique to evaluate the fund-supported programs.

This technique is capable of serving the objectives set by this study. First by taking economic growth, current account balance, inflation rate, budget deficit, and unemployment as the target variables, we can estimate the impact of the fund-supported programs on the macroeconomic scenario of the Pakistan economy. Second, by including the reaction function in the model it also deals with the difference between the targeted and actual outcomes and it concentrates on the effect of the other policy options that are not included in the program design by taking the vector of the policies which might have been adopted in the absence of the programs. Third, including the vector for the exogenous variables, their effect on the target variable is also incorporated.

The Model

Suppose that the target variable is determined according to:

$$Y_i = \beta_1 + \beta_2 x_i + \beta_3 w_i + \beta^{IMF} d + \varepsilon \qquad (1)$$

Where Y_i is the target variable (i = Current account balance, economic growth, inflation rate, fiscal deficit, unemployment and foreign exchange reserves respectively), x_i is a vector of policy instruments (i.e. the exchange rate, fiscal deficit, domestic credit, inflation rate), w are foreign exogenous variables (eg. Terms of trade, international interest rate), d is a dummy variable and ε is a random shock. The dummy variable takes on the value 1 if the fund-supported program is in effect during the period in question and zero otherwise. The parameter β^{IMF} measures the effect of the program during this period on variable y.

It is important to note that the definition of β means the x_i refers to the policies that would have been adopted in the absence of a program. The vector x_i is therefore directly observable only if there is a fund-supported

program; for non-program x_i must be estimated. One way in which x_i can be estimated is via the simple reaction function:

$$\Delta x_i = \gamma[y_i^{\,d} - (y_i)_{-1}] + \eta \tag{2}$$

Where y_i is a vector of target variables, $y_i^{\,d}$ is the vector of their desired values, γ is an adjustment parameter, η_i is a vector of random shocks, and Δ is first-difference operator. Equation (2) basically says that the change in the country's macroeconomic policy instruments between the current and previous period will be the function of the difference between desired values of the target variables this period and their actual values last period.

The model can be employed to examine the statistical properties of the before–after and with-without approaches to an estimation of the program effects. The before-after estimator β^{BA} is:

$$\beta^{BA} = \Delta y_i \quad \text{for } i \in P \tag{3}$$

Where P denotes the set of program countries during the current period. The expected value of this estimator conditional on observed values of the foreign exogenous variables is:

$$E(\beta^{BA}\backslash\ i\in P, \Delta w) = \beta^{IMF} + \beta_3\,\Delta w + E(\beta_2\,\Delta x_i + \Delta\varepsilon\backslash\ i\in P, \Delta w) \tag{4}$$

Which is equal to the true value of β^{IMF} only if:

$$E(\beta_2\,\Delta x_i + \Delta\varepsilon\ \backslash\ i\in P,\ \Delta w)\ = -\,\beta_3\,\Delta w \tag{5}$$

The before-after estimator is unbiased if one expects that the non-program determinants of y_i would have behaved in a way to leave the y_i unchanged, on average, between the program and the non-program periods. In other words any change in the external market, innovation in policies, and other unobserved variables cancel each other out.

The with-without estimator β^{ww} is given by:

$$\beta^{ww} = \Delta y_{ij} - \Delta y_{nj} \tag{6}$$

Where Δy_{nj} is the average value of the Δy_{ij} over some set N of non-program countries. Since we can observe Δx and $\Delta\varepsilon_{ij}$ for all $i\in N$, the information set, defined as Ω, now consists of:

$$\Omega = \{(\Delta x_i, \Delta \varepsilon_{ij} \text{ for } i \in N), \Delta w\}$$

Taking expectations of β^{ww} conditional on $i \in P$ and Ω we have:

$$E(\beta^{ww} \backslash i \in P, \Omega) = \beta^{IMF} + E(\beta_2 \Delta x_i + \Delta \varepsilon_{ij} \backslash i \in P, \Omega) - (\beta_2 \Delta x_n + \Delta \varepsilon_{nj}) \quad (7)$$

The with-without estimator will be unbiased if:

$$E(\beta_2 \Delta x_i + \Delta \varepsilon_{ij} \backslash i \in P, \Omega) = \beta_2 \Delta x_n + \Delta \varepsilon_{nj} \quad (8)$$

In other words, if it can be expected that in the absence of the program, the country would have behaved just like the average member of the non-program reference group, then the estimator will be unbiased.

An alternative to the before-after and with-without approach can be derived by using equation (2) to substitute out the unobservable policy changes that would occur in the absence of a fund program (i.e. for x_i) from equation (1). The generalized evaluation estimator is:

$$\Delta y_i = \beta_{oi} - (y_i)_{-1} (\gamma \beta_2 + 1) + (x_i)_{-1} \beta_2 + \beta_3 w + \beta^{IMF} d + (\varepsilon + \beta_2 \eta) \quad (9)$$

Where y_i^d is subsumed into the constant such that $\beta_{oi} = \beta_1 + \beta_2 y_i^d$.

Econometric estimation of equation (9) produces an estimate of the β^{IMF} that is not subject to the criticism leveled at the before-after and the with-without estimators. This equation takes care of estimation of the counterfactual by controlling for the factors that are systematically related to the policies that would have been followed in the country without the program, which is to include the lag values of the target variables and the policy instruments in the specification. The equation would be estimated by OLS estimation.

Results and discussion

The model is nested as to test the simultaneous effect of, a) the IMF programs, b) policy shocks, and c) foreign exogenous variables. It serves our objective of diagnosing the impact of fund-supported programs, while taking into account the effect of other policy options that might have been adopted in the absence of the programs and foreign exogenous variables. The model takes the IMF programs, other policy responses and the foreign exogenous variables as different explanatory variables, which makes it easier to gauge the net effect of the fund-supported programs on the target variables. The targeted macroeconomic variables are the current account

balance, unemployment, GDP growth, inflation rate and the budgetary balance[6]. The annual data from World Bank data sources for Pakistan have been taken from 1973 to 2000.

Equation (9) is estimated for all five-target variables, discussed above. As we deal with time series data, the Augmented Dickey-Fuller Unit Root Test is used to check for stationarity. The results suggested that the data is stationary for all the target variables. The statistical parameters for the overall significance are represented in Table-1. The R^2 is quite high for all equations. That is .85, .79, .77, .64 and .74 for the equations of the current account balance, unemployment, GDP growth, budgetary balance and the inflation rate, respectively. These results show that in all equations except the budgetary balance more than 75 percent of variation in target variables is defined by the explanatory variables. The F statistics are 18.7, 12.27, 13.9, 7.3 and 11.7 for all equations of current account balance, unemployment, GDP growth, budgetary balance and the inflation rate, respectively. It is highly significant for all equations, which clearly tells us that all parameters of the explanatory variables are non-zero. The Q statistic is used for the detection of autocorrelation or partial autocorrelation. The final results find no auto or partial autocorrelation, while the White-Hetroskedasticity test shows no evidence of of hetroskedasticity.

(1) The current account balance

The regression results for the current account balance show that the parameter of the IMF dummy indicates a negative impact on the current account balance, which is statistically significant at 1 percent level of significance, and the t statistic is -2.67, which is quite high. The inflation rate (CPI) policy variable has also worsened the current account variable and the result is significant at the 5 percent level. Another policy variable, net capital account (NCA) has shown positive significance, and indicates that the

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[6] The selection of the target variables to gauge the macroeconomic performance of the typical fund supported program is very crucial, in this study five target variables are taken, namely: GDP growth, Inflation Rate, Unemployment, Fiscal Deficit, and Current Account Deficit. The rationale behind the target selection is very simple as discussed in the introduction earlier that the general goals of any stabilization policy are; stable growth, low and stable rate of inflation and high level of employment (lower unemployment). For this reason GDP growth, inflation rate and unemployment have been taken as the target variables so as to see how much these programs are successful in attaining their basic goals. The rationale behind the selection of the current account balances and fiscal deficit is that the prime responsibility of the IMF is to assist the member country when it faces a balance of payments problem and according to their approach, fiscal imbalance is the main culprit behind the balance of payments problem.

net capital account has caused an improvement in the current account balance. Though its parameter is significant at the 5 percent level of significance, the magnitude of the parameter is very small. The structural dummy has been taken as the foreign exogenous variable, which has also a positive significant impact over the current account position at the 5 percent level of significance. The parameter of current account's own lag taken as an explanatory variable shows that the current account is positively related to its own lag. The average effect of all the other variables that are not included in the model (represented by constant C) is negative.

The results indicate that due to IMF supported programs Pakistan's current account situation has further deteriorated. Continuous attempts to correct balance of payments imbalances through liberalization of the economy probably leading to an immediate and undifferentiated reduction in import tariffs, which has not given national industries adequate time to improve their competitiveness with foreign firms. The other reason is that the Pakistan economy does not have a diversified portfolio of exports, and it mostly relies on the export of textile family products and a few agricultural products. Continuous depreciation of the rupee has not shown any positive signs in terms of expanding the demand for Pakistani exports and has not shown any satisfactory results in terms of diminishing the demand for foreign goods that are quite price inelastic in Pakistan, because most of Pakistan's imports consist of capital goods that are used as an input in domestic industry.

The other policy variable, net capital account (NCA) plays an accommodating role in terms of compensating the current account deficits and leaving the balance of payments in better condition. At the same time, the inflation rate (CPI) has worsened the current account balance situation in Pakistan. Though it has not significantly increased the prices of exports, the prime cause is that during the entire last decade the Pakistan economy has experienced imported inflation in terms of increases in the prices of imports due to devaluation. The foreign exogenous variable that is taken as the dummy for the structural variable, which is positive and significant might have directly affected the current account balance.

(2) Unemployment:

As presented in Table 1 the regression results indicate a very low level of significance and the parameter is as high as 1.8 that the IMF supported programs in Pakistan have worsened the unemployment situation in the country. In other words the IMF has a positive impact over the rate of unemployment. The policy variable total expenditure as percentage of

GDP (EXPTGDP) has a significant effect at the 1% level of significance on unemployment. The sign of the parameter is negative which shows that an increase in the total expenditure reduces the unemployment rate. The other policy variable inflation also has a negative coefficient, which implies that the inflationary pressures have helped to lower the unemployment level. The foreign exogenous variable terms of trade (TOT) has shown a negative impact on unemployment which is significant at the 10 percent level of significance. The results further show that unemployment is positively affected by one period lagged unemployment that is significant at the 1 percent level of significance. And the average effect of all the other variables that are not included in the model is also positive at the 1 percent level of significance.

IMF supported programs have worsened the unemployment situation in the economy, which was 1.7% of the total labor force in 1970 and has worsened to 7.8% of the total labor force in 2000. Reduction in public expenditure is one of the main conditionalities of the IMF in all these programs. The reduction in public expenditure can be achieved either by restricting the acquisition of the commodities or limiting the employment cost through reduction in employment or limiting the increase in the nominal wages below the inflation rate. The decline in the employment cost has been brought about by containing the increase in the nominal wages of government employees and even imposing a complete ban on recruitments and encouraging early retirement. Privatization has also inversely affected the level of employment; the new owners have laid off workers employed in the public sector. The continuous contractionary policies have caused little expansion of the economy which has been unable to employ the growing labor force in the country. During the programs the Pakistani economy witnessed not only complete bans on recruitment but also schemes such as the "golden hand shake" that were introduced to encourage early retirement and on the other hand a continuous decrease in development expenditures has also caused worsened the employment situation in the country.

The policy variables that might have been adopted in the absence of the program have a significant negative effect on unemployment. Increases in expenditure expand the productive activities in the economy that provide opportunities for employment and hence reduce unemployment. As it does not show much increase after the involvement in the fund-supported programs, it did not play a compensatory role in reducing unemployment. But surely any expansion reveals an increase in the level of employment. The price level shows the well known Phillips curve relationship in the case of Pakistan. Any increase in the price level increases the profitability of the industry that causes its further expansion, or inflation is caused by any

expansionary policy and both have the same implication in terms of raising the demand for labor and thereby reducing the rate of unemployment. Though the inflation rate was in double digits almost in all the years of IMF programs since 1988, except for the last three years, this was not sufficient to compensate for the unemployment created by introducing IMF supported programs. The foreign exogenous variable terms of trade (TOT) have a negative effect on unemployment and continuous deterioration in the terms of trade has caused a substantial increase in the number of unemployed people.

(3) GDP growth:

The results of GDP growth indicate that the IMF programs have lowered economic growth. Its coefficient has a negative sign, the t statistic is greater than 1, but the results are not statistically significant. The policy variables exchange rate and the inflation rate both have negative parameters and both are significant at the 5 percent level of significance. So the results show that these are the policy shocks that might have a negative significant effect over GDP growth. The foreign exogenous variables have no significant effect over growth. It is positively influenced by its own lag, whose effect is statically significant at the 1 percent level of significance. The average effect of all the other variables not included in the model is positive and significant at the 1 percent level.

The regression results point out that the IMF programs may have slowed down the pace of economic growth that the Pakistan economy was enjoying before the adoption of the fund-supported programs. That is the main critique of the fund-supported programs-that the contractionary policy to diminish the budget deficits and stabilize the prices have been achieved at the expense of growth. But the negative effect of the IMF programs over the Pakistan economy is not statistically significant. There are other policy variables that are responsible for the slowing down of the growth rate of GDP. One is exchange rate devaluation of the Pak rupee which has made imports more expensive, and since major imports are used as an input in the domestic industry, devaluation has lowered the productive activities in the economy. It has worsened the situation both ways, one by diminishing the productive activities and second by increasing the cost of production for the domestic industries that further caused the domestic prices to increase. So inflation has also negatively hit the economic growth of the country by making the domestic products expensive and the demand for imported goods to rise. The overall effect that the Pakistan economy has faced in terms of GDP growth after the involvement in the fund-supported programs may possibly be a contraction in the growth rate.

Table-1: Results

	ΔCA	ΔUE	ΔGDP	ΔCPI	ΔBB
D^{IMF}	-0.94	1.81	-0.54	5.92	1.01
	(-2.67)*	(4.36)*	(-1.33)	(4.50)*	(2.03)**
D^{98}	3.07	-	-	-	-
	(2.28)**				
TOT	-	-2.74E-11	-	-	5.69E-11
		(-1.86)***			(2.84)*
$(ER)_{-1}$	-	-	-0.06	0.74	-
			(-2.02)**	(2.50)**	
$(M2)_{-1}$	-	-	-	1.57E-11	-
				(2.10)**	
$(BRT)_{-1}$	-	-	-	-	1.17
					(2.27)**
$(EXPTGDP)_{-1}$	-	-0.35	-	-	-
		(-3.72)*			
$(CPI)_{-1}$	-0.14	-0.04	-0.11	-0.46	-
	(-2.50)**	(-2.34)**	(-2.09)**	(-7.00)*	
$(NCA)_{-1}$	3.48E-09	-	-	-	-
	(2.10)**				
$(UE)_{-1}$	-	-0.23	-	-	-
		(-2.94)*			
$(GDP)_{-1}$	-	-	-0.72	-	-
			(-3.79)*		
$(BB)_{-1}$	-	-	-	-	-0.29
					(-1.79)***
C	-3.15	7.49	6.53	9.62	-13.64
	(-3.00)*	(3.78)*	(3.46)*	(3.37)*	(-2.34)**
$(CA)_{-1}$	-0.79				
	(-5.00)*				
R^2	0.85	0.79	0.77	0.64	0.74
F statistics	18.70	12.27	13.90	7.30	11.70

Note: (i) The values in brackets are t statistics.

(ii) The *, **, *** shows the 1%, 5% and 10% level of significance, respectively.

(iii) No * indicates insignificant results.

(iv) All the F statistics are significant at very high level of significance

(4) Budgetary balance:

The results derived from the budgetary balance equation suggest that the parameter of the IMF programs has a positive sign and is statistically significant at the 5 percent level. As depicted in the table the IMF programs have improved the budgetary balance. They have reduced the budget deficit, which is a chronic disease for the economy. The bank rate policy variable has also a positive coefficient that is significant at the 5 percent level of significance. So the bank rate has also contributed to the reduction of the budget deficit. The foreign exogenous variable terms of trade has a positive parameter at 1 percent level of significance but it has worsened over the last twenty years and contributed to the increase in the fiscal deficit. The own lag of the budgetary balance is significant at the 10 percent level with a negative sign. The constant term has a negative impact over the budgetary balance, showing the average effect of all the other variables excluding those presented in the model which is negative and significant at the 5 percent level of significance.

This is the only area where the Pakistan economy has been slightly better off due to fund supported programs. The parameter of the IMF dummy shows a positive sign that indicates that due to IMF supported programs the fiscal deficit, which was the major imbalance in the economy, has been reduced. The fiscal deficit has come down from 8 percent of GDP in 1987 to 5 percent of GDP in 2000. The conditionality posed by the IMF to reduce the public expenditure and increase tax collection has contributed to the reduction of the budget deficit. Pakistan has cut the public expenditure from the very beginning of the programs though the share of tax collection to GDP does not show much improvement. Second, increasing the autonomous power of the central bank and financial reforms set by the fund has increased the cost of domestic financing of the government. From 1991 the government started the full-fledged system of auctioning of government debt and allowed the rate of return on the treasury bills to rise from the unrealistic 6 percent where it was earlier, to a more realistic 13 percent. All these financial improvements introduced competition in government borrowing from the public, and caused the increase in the cost of borrowing in terms of offering higher rates of return on treasury bills and other government securities.

Bengali and Ahmed (2001) have diagnosed the reduction in the fiscal deficit in terms of the different distributional implications and this is quite important to note here. For example, raising revenue or reduction in expenditure can lower the budget deficit. Revenues can be generated through direct or indirect taxes: the former impacts the rich while the latter

impacts the poor. In the same way expenditure can be contained by reductions in the current expenditure or reduction in development expenditure. The former impacts on existing employment while the latter impacts on future employment creation. The data highlight that revenue shortfalls, current account overruns and cuts in development expenditure are the norm. That is what is indicated above in the results discussion of the unemployment estimator, that the IMF programs have reduced the level of employment in the country.

The other policy variable that caused improvement in the budget deficit is the bank rate (BRT). The economic logic behind the response of the government to the increase in the interest rate is very basic: that the increase in the domestic interest rate forces the Treasury bill rate to increase in order to increase the domestic debt portfolio. In other words the increase in the rate of interest has increased the cost of borrowing of the government from the public.

(5) Consumer Price Index (CPI):

The inflation estimator provides the result that IMF programs have contributed to the increase in the rate of inflation in the economy. The very high parameter of the IMF dummy (5.9), with the positive sign and significant at 1 percent, shows that IMF programs have brought a considerable increase in the rate of inflation. The other policy variables, money supply and the exchange rate, are also contributors to the increase in the rate of inflation. Money supply has a very small parameter estimate significant at the 5 percent level. The exchange rate has also a significant parameter at 5 percent. Foreign exogenous variables have no significant impact on the inflation rate. The parameter of its own lag has a negative sign and significant at 1 percent indicating that it is positively related to its own lag. The effect of all other variables not included in the model is positive and significant at the 1 percent level of significance for the inflation equation.

The large and positive parameter estimate on the dummy of the IMF implies that the involvement in the fund-supported programs has increased the rate of inflation in the economy. It was in double digits except for the last three years. Though most of the policies by the fund-supported programs are contractionary in their nature, the main policy regarding trade is the depreciation of the currency, because IMF and other financial institutions believe that currencies in most developing countries are over valued so they must be rationalized. After the Bretton Woods system in which the rupee was pegged to the dollar, the Pakistan economy is

operating under the managed floating exchange rate. The depreciation of the Pak Rupee increased the prices of machinery and crude oil. Both are the basic inputs in domestic industry, and the rise in their prices increased the pressure of cost-push inflation, the main source of inflation in Pakistan. But for the last three years the rate of inflation has come down due to the continuous contractionary policies on both counts in terms of fiscal policy by reducing public expenditure, and by monetary policy by reducing the growth of the money supply. But price stability has been achieved at the expense of GDP growth, increasing unemployment and increasing poverty.

There is no significant effect of the foreign exogenous variable on the CPI. The other policy variables, the exchange rate and money supply (M2), have also contributed to the increase in the rate of inflation in the Pakistan economy. The logic for the exchange rate parameter is the same as what has been discussed above by forcing cost-push inflation in the economy. Increases in money supply contribute to an increase in domestic demand for goods and causes prices to rise, which is known as demand-pull inflation. But the coefficient of M2 is so small that its effect can be ignored. So the regression results suggest that inflation in Pakistan is caused by the increase in input prices, or in other words cost-push inflation is dominant in this case.

The sequencing of reforms:

There has been much discussion regarding the sequencing of the reforms. Results of macroeconomic outcomes discussed earlier show that the IMF programs have increased the unemployment rate, increased the inflation rate, worsened the current account deficits and contributed to slowing down the pace of the economy. Besides the other reasons, inadequate sequencing of economic reforms is also a contributor to these results. The first indicator of the implementation of reforms can be the completeness of the arrangements settled with the IMF, as these arrangements are based on the conditionalities set by the IMF. Inability to meet the minimum requirements causes the termination of disbursement of a loan before the expiration date and completing the approved amount. After 1988, Pakistan has only once in 2000-01 has been able to draw the full amount of the approved arrangement. It shows Pakistan has been unable to meet the target requirements set by the IMF. That clearly shows inadequate sequencing of reforms.

First on the agenda of these economic reforms was macroeconomic stability consisting of three ingredients: budgetary balance, balance of payments improvement and reduction in inflation. Fiscal and monetary

policy reforms and devaluation have mainly aimed at achieving this (Ahmad, 1998). The normal sequencing of the fund reforms is first to improve the budgetary surplus and to reduce the price level. In the case of Pakistan, financial sector reforms were adopted in the very beginning of the reform packages that increased the competitiveness of the government to generate funds from the public and resulted in an increase in the rate of return on treasury bills and other government securities. This increase in the interest rate increased debt servicing of the government by many fold. Clearly the adoption of financial sector reforms was not a suitable strategy, which not only increased government expenditure but also reduced development expenditure, and contributed to the slowing pace of the economy and poverty that was reduced in the 1980's then again went up very rapidly.

It is important to restructure state enterprises, and privatization is often an effective way to do so. But moving a person from low productivity jobs in state enterprises to unemployment does not increase the country's income, and it certainly does not increase the welfare of the workers. Sufficient effort was not made to increase employment in order to counteract unemployment created by privatization and contractionary policies. As Stiglitz (2002) pointed out, macroeconomic stabilization is on the agenda of the IMF supported programs but job creation is missing. The objective of the reduction in fiscal deficit by reducing the expenditure posed some serious costs in terms of worsening the development indicators, as the development expenditure shows a declining trend throughout the reform period. And the government still fails to provide safety nets to compensate for the reduction in development expenditure that on the one hand increases unemployment, and the number of the poor on the other hand. The sequencing of fiscal deficit cuts might have been beneficial if the development expenditure had been further considered in the designing of the programs prior to the reduction in the budget deficit.

Trade liberalization is supposed to enhance the country's income by forcing resources to move from less productive uses to more productive uses. But moving resources from low productivity uses to zero productivity does not enrich the country, and this is what happened all too often under IMF programs. It is easy to destroy jobs, and this is often the immediate impact of trade liberalization, as inefficient industries close down under pressure from international competition (Stiglitz, 2002). The immediate reduction in tariff rates and reduction in the non-tariff barriers before taking adequate measures to enable domestic firms to compete with foreign firms, resulted in the shutting down of domestic units and deterioration in the current account balance. Another pitfall in the sequencing of tariff

reforms and changes in the tax structure is the reliance on the regressive tax structure. Indirect taxes (Value Added Tax) have increased the burden of taxes on the poor and are an important contributor to income inequality in the 1990's (Kemal, 2003). The major flaw in the sequencing of IMF supported reforms is that the consideration of fairness is totally ignored. The Washington Consensus policies believe in trickle-down economics, which implies that the best way to help the poor is to make the economy grow. What actually happened in Pakistan is that due to inadequate consideration of poverty in the reforms, poverty increased very rapidly in the whole decade of the 1990's causing a chronic problem for the Pakistan economy to deal with.

Summary and Conclusion

Pakistan is one of the prolonged users of IMF supported programs, after initiating it in 1988. Fifteen years of history with these programs certainly calls for the evaluation of programs. In most parts of the world, the evaluation of the macroeconomic outcomes has been used as a prime measure to analyze the performance of fund-supported programs. It applies the counterfactual approach to assess the macroeconomic outcomes of the program, which is to compare the macroeconomic performance of the set of countries with programs to the set of countries without programs or comparing the pre reform macroeconomic performance with post reform.

The Generalized Evaluation Estimator technique is used in order to measure the impact of the IMF supported programs over the targeted macroeconomic variables. The technique used here takes care of the foreign exogenous factors, and the other policy options than the IMF suggested that may affect the performance of target variables, by taking the exogenous variables along with the IMF dummy. The other policy variables are directly observable in the absence of the programs but cannot be observed during the program years, so to overcome this problem reaction functions are estimated.

The study suggests that IMF supported programs have worsened the current account balance of Pakistan during the program years. Immediate liberalization of trade has caused many domestic units to be shut down. Continuous devaluation of the rupee against the dollar has pushed up the prices of crude oil and machinery, which are the major inputs of domestic industry and are imported from foreign countries. This increase in the cost of the domestic firms has made them unable to compete with other foreign firms. Economic reforms have posed a huge cost in the form of rapid increases in unemployment. Privatization, reductions in public expenditure

combined with contractionary monetary policy all have contributed to growing unemployment in the country.

IMF supported programs are also the cause of the increase in the price level during the last twelve years. Though on the demand side all of the program policies were mainly contractionary, in order to bring price stability, the supply side (cost push inflation) has come into the picture during program years, which is mainly due to devaluation and liberalization of trade that has increased the cost of the domestic industries by pushing up the prices of inputs used in these industries. Though the effect of fund-supported programs on economic growth is negative, it is not statistically significant. But the IMF programs have succeeded in bringing a slight reduction of the budget deficit during the last twelve years. Public expenditure cuts and increases in tax revenue are among the main conditionalities of the IMF economic reform packages, but in the case of Pakistan the share of revenue to GDP has not shown much improvement. However development expenditure shows a continuous declining trend, bringing improvements in the budget surplus at the cost of increasing unemployment and rapid increase in poverty.

Countries' adoption of gradual stabilization policies plays a major role in the success of reform programs. Pakistan initiated financial reforms during the early years of the programs. The sequencing of financial reforms has been critical in the sense that these reforms were undertaken before the reduction in the budget deficit. Financial reforms increased the competitiveness of the government in generating funds from the public, resulting in an increase in treasury rates. Increases in the interest rate on the treasury bills and other government securities caused the debt servicing of the government to accelerate. As the government faced the conditionality of reducing public expenditure an increase in debt servicing put pressure on the government to reduce development expenditure, which resulted in a rapid increase of poverty incidence.

Privatization was adopted, but prior to the adoption no safety nets were formed for those workers who would be laid off after the privatization. This wrong sequencing of privatization has led to chronic unemployment that is still increasing. In the trade regime, immediate openness to trade and reductions in tariffs and other quantitative and non-quantitative measures in order to enhance efficiency and competitiveness have caused many domestic units to be closed, and during these reforms around 3000 units have been shut down (Amjad, 2004). The shift in the tax structure from tariff to regressive taxes has further widened the inequality gap in the country.

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