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Fiscal Issues in Macroeconomic Stabilization

Lance Taylor

Fiscal austerity's threat to normal policy goals looms even larger because many of its effects are unexpected and poorly understood.

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World Development Report

A key question for stabilization programs is this: How do governments get into fiscal difficulty in the first place?

Three views predominate: the political deficit, the structural deficit, and the inflation tax. In the first view, the state is forced toward taxing too little and spending too much, both to pay off specific interest groups and to sustain employment through aggregate demand. In the second view, the economy suffers a contractionary shock — such as falling terms of trade or interest rate incursions on external debt — which the government tries to offset by fiscal means in the short run. In the third view, the state indulges the desire to use revenue from the inflation tax in the absence of other sources.

Fiscal deficits thus have numerous causes — not all of them irrational, not all adding to aggregate demand. Reducing the deficit is nevertheless the sine qua non of orthodox stabilization packages. How does such austerity affect an economy's chances of achieving the normal policy goals of:

- Maintaining socially acceptable capacity use and growth?
- Keeping inflation tolerable?
- Altering the distributions of income and wealth?
- Maintaining self-reliance in trade and external finance?

It makes each of these tasks harder, because of the incomplete understanding of the likely effects of fiscal measures.

First, policymakers need to know more about the specific effects of different policies. For example, cuts in public investment may also cause private capital formation to decline. Changes in the prices that public enterprises charge for food or essential services can have strong distributional repercussions. And the bidding up of interest rates can, if accompanied by other incentives, make capital repatriation and emigrant remittance more likely.

Second, fiscal measures should not be independent of other policy moves. If devaluation causes contraction, teaming it with fiscal restraint may lead to extreme losses of output — the overkill for which orthodox programs are often criticized.

Third, fiscal measures can sometimes substitute for other (less savory) policy changes. For example, the narrower and more directed fiscal interventions can avoid many of devaluation's unpleasant economywide effects (political visibility, output contractions, and price inflation because of the higher costs of imported inputs).

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Fiscal Issues in Macroeconomic Stabilization

by
Lance Taylor

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This paper is about fiscal policy issues that arise during macroeconomic stabilization in developing economies. The empirical background comes from a recent study of stabilization episodes in 18 countries, organized by the World Institute for Development Economics Research (WIDER) in Helsinki. The results are reviewed in a summary monograph by Taylor (1988), and the country papers are available from WIDER.

Fiscal policy cannot be described outside a macroeconomic framework. Section 1 sets out the basics, as they apply in the WIDER studies. Section 2 takes up three theories about the fiscal deficit -- it may rise for political or structural reasons, or perhaps because the relevant authorities want to maximize revenue from the inflation tax. Section 3 is about the effects of deficit reduction, a central component of orthodox stabilization packages. Section 4 takes up other fiscal topics brought up in the WIDER country papers.

1. Macroeconomic Background

There are four classic modes of macroeconomic adjustment in the short run -- changes in the level of output, the trade balance, income distribution, and real wealth. We begin with the first, familiar from the General Theory and countless macro textbooks in its wake. A demand injection, say greater government spending or reduced taxes, makes economic activity rise. The increased production generates additional income, which feeds back into more consumption, still greater output, and so on until the multiplier chain converges to an equilibrium level of supply.

This story is well-known, and emphasized in the WIDER

studies. Stabilization programs based upon austerity always concentrate on reducing the fiscal deficit. As discussed in section 3, they set off a contractionary multiplier output response instead of slowing price increases as they are often meant to do. Expansionary policies may stimulate output within some range, the prior limits to which are uncertain ex ante but essential to policy design.

Besides the fiscal position, the income distribution may also change in response to policy maneuvers or other forces. In stabilization packages, "incomes policies," which often have a large fiscal content, are directed toward distributional ends. Orthodox programs, for example, frequently incorporate wage cuts, price increases for export crops, and other moves aimed changing the pattern of resource allocation. What is their effect on the level of economic activity?

To answer such a question, one must begin by distinguishing relevent economic groups, i.e. by setting up a class structure. Although the WIDER studies work with fairly complex "social matrixes" to support their distributional analyses, we stick with the basics here. The simplest and most traditional model focuses on worker-capitalist conflict over an index of distribution, say the real wage.

How does the level of activity adjust when the real wage (or more generally an indicator of the progressiveness of the income distribution) goes up? Economists concentrate on two standard lines of response. The generally orthodox story is that a higher wage forces employers to cut back on jobs while at the same time exports fall because they become less cost-competitive. Through

both channels, real wage increases make output decline. Contrariwise, wage cuts stimulate production. This sort of output response is often presumed by designers of orthodox stabilization programs.

Alternatively, wage cuts are likely to hold down consumer demand and thereby the level of output -- a common observation in the WIDER studies. If private investment responds to the level of activity, as in standard accelerator investment theories, capital formation and growth will also decline. Real wage reductions lead to economic stagnation; wage increases perk up a sluggish system. This sort of response to distributional change is sometimes called "stagnationist;" its mirror image of output increases in response to wage reductions characterizes an "exhilarationist" macro system.

Although there is no certainty regarding the matter, one might expect stagnationist adjustment when the real wage is low, and exhilaration when it is high. The "Output response" curve in Figure 1 is based on these hypotheses, with a positive slope for low wage levels, and a negative slope for high ones. If output adjustment to demand changes is rapid (the usual supposition), the economy will "always" be on the output response locus, unless other restrictions bind. The locus will change its position in response to policy moves. Expansionary fiscal actions shift it to the right, increasing economic activity with an unchanged income distribution.

What forms could additional restrictions on output take? Production in developing economies is subject to several kinds of upper bounds. If industrial activity relies upon intermediate

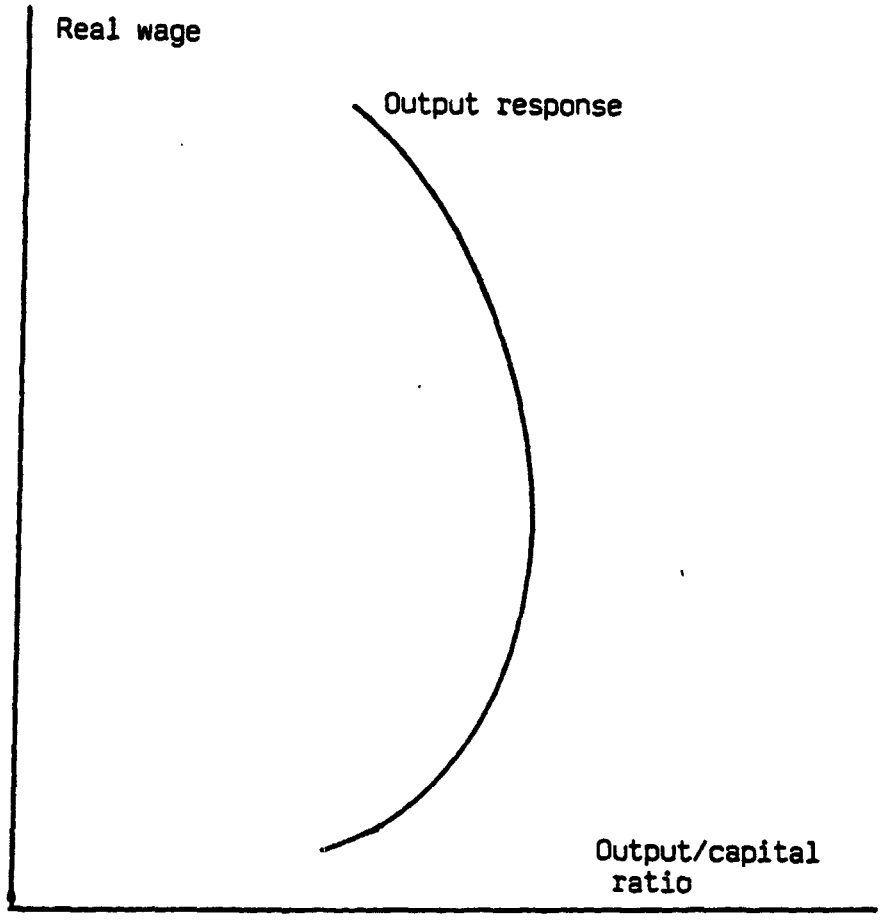

Figure 1: Relationship between the real wage and output with no capacity constraint.

imports (the usual case when import substitution of final goods has been pursued), scarce foreign exchange may limit potential supply. At times, capacity within key sectors or their suppliers (e.g. of non-traded infrastructural inputs such as transport and energy) may hold down production levels. Finally, in the short run supplies of key commodities like staple foods will be determined by weather conditions and the seasonal cycle. At the macro level, all these constraints add up to a "Capacity limit," the vertical line in Figure 2.

In Figure 2, the economy may operate below capacity either along the stagnationist segment AB or in the exhilarationist range CD. Along the line segment BC, production constraints bind. Below full capacity, adjustment of output toward the relevant curve is usually assumed to be rapid, as shown by the small arrows. The interesting question in terms of the diagram is how to describe macro adjustment when capacity limits begin to bind, due for example to progressive income redistribution in a stagnationist economy or expansionary policy which shifts the entire Ouput response curve to the right. Three adjustment mechanisms are emphasized in the WIDER studies.

First, a demand level exceeding capacity will probably make prices rise. If the nominal wage is not fully indexed to inflation, the real wage declines, reducing demand and output in a stagnationist system. Short-run inflationary adjustment via workers's "forced saving" (or "automatic lacking" in Dennis Robertson's phrase) toward limited capacity is stable in this case -- the segment BZ in Figure 2. If the economy behaves in exhilarationist fashion -- segment ?C -- price increases raise

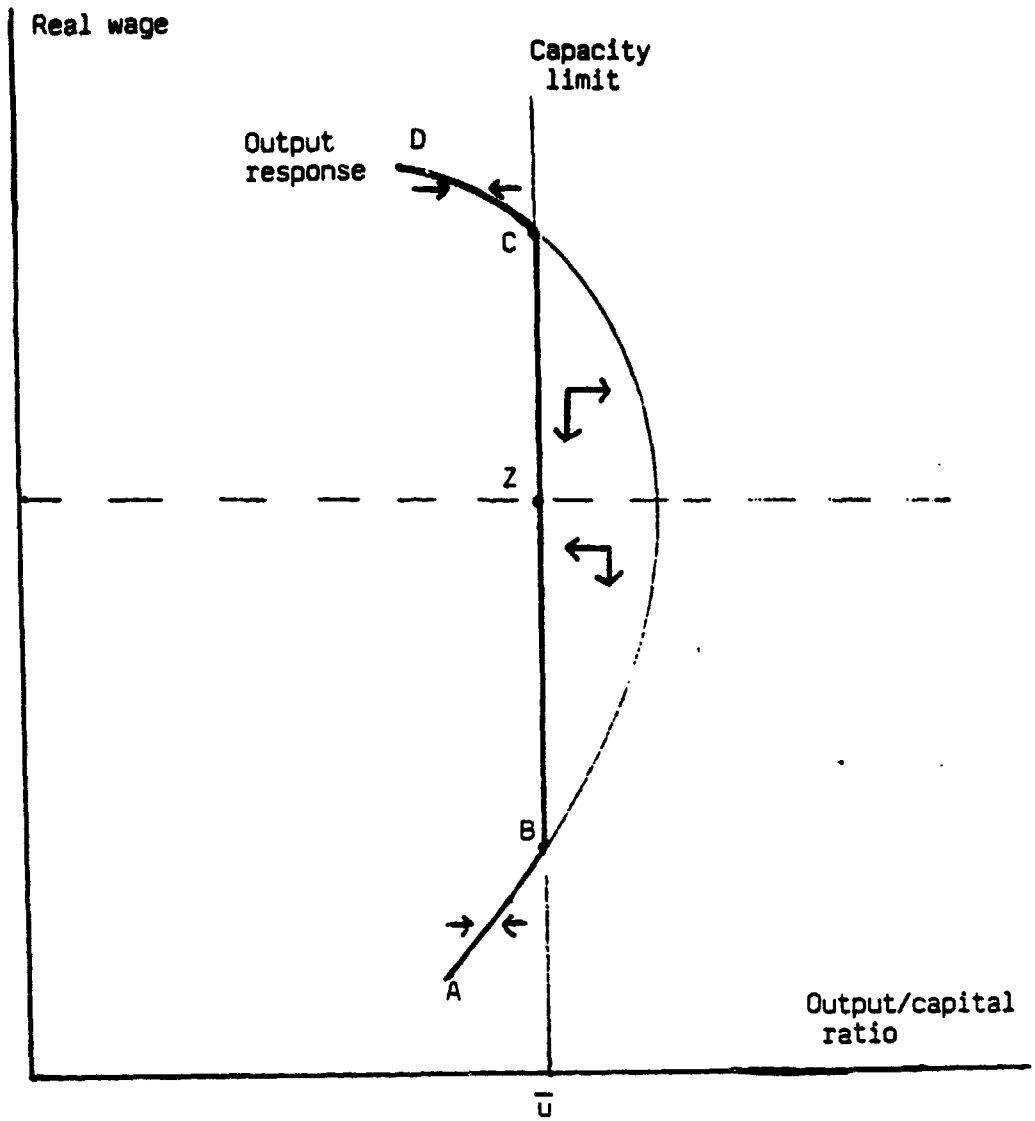

Figure 2: Modes of adjustment with and without a binding capacity constraint.

profits, stimulate investment, and lead toward hyperinflation in response to an initial increment in demand. Such cases may occasionally arise, but not in the WIDER sample.

Second, the initial price increase will reduce "real balances," i.e. the money stock divided by the price level. With the real value of their assets reduced by this change, wealth-holders may save more to compensate, cutting aggregate demand. This process runs parallel to forced saving -- the two are difficult to distinguish in practice.

When there is an ongoing inflation, the real balance adjustment can be reinterpreted as an "inflation tax." To see how, we can invoke the quantity theory of money as enshrined in the "equation of exchange," $MV = PX$, where M is the money supply, V is velocity (taken to be an institutionally determined constant), P is the price level, and X is output (assumed fixed by supply conditions or capacity). If we let "hats" over variables denote their rates of growth, the dynamic version of the quantity equation is $\hat{M} = \hat{P} + \hat{X}$, where $\hat{M} = \Delta M/M$, etc. and velocity is assumed constant.

This new equation simply states that the growth rate of the money supply equals the sum of the inflation rate and the output growth rate -- a tautology when V is constant. Modest additional manipulation produces $\Delta M = \Delta P(M/P) + P\Delta X/V$. An incremental increase in money supply (from an increased fiscal deficit financed at the central bank, for example) decomposes into the instantaneous loss in real balances M/P due to a price increase ΔP (sometimes called the "inflation tax") and an output growth term (sometimes called "seignorage," although terminology is not fully

standardized in this area).

The pure tax yield rises along with inflation. However, if V gradually declines as $\dot{P}$ rises (an empirical truism), the seignorage yield declines. Governments at times are said to push up aggregate demand, hoping to finance the corresponding fiscal deficit via seignorage and the inflation tax. As we will see below, the assertion in practice seems a bit far-fetched.

A final means of evading capacity limitations is through imports -- the economy can satisfy increased demand while meeting local supply restrictions through this device. Two problems arise. One, technical, is that essentially non-traded goods such as infrastructure services and the construction component of investment are not easy to bring in to alleviate capacity limits. With high demand, prices for such commodities are bound to rise. Second, foreign exchange has to be available from reserves or capital inflows to finance extra purchases abroad. Such plenitude of dollars is rare in the Third World.

2. The Fiscal Deficit

Against this macroeconomic backdrop, we can ask a key question for stabilization programs: How does a government get into fiscal difficulty -- conventionally defined as a large and/or increasing public sector deficit -- in the first place? Three views predominate in the literature. They can be labelled the political deficit, the structural deficit, and the inflation tax approaches respectively.

Blaming political forces for fiscal expansion is an old tradition in economics, shared by conservatives such as Schumpeter (1954) and radicals like O'Connor (1973) at different places and

times. The general view is that to maintain its political legitimacy, the state is forced toward taxing too little or spending too much, both to pay off specific interest groups and (in a Keynesian twist) to sustain the level of employment via aggregate demand. This policy bias leads ultimately to increasing external deficits and/or inflation, requiring stabilization through deficit reduction in some long run. In Figure 2, the expansionary policies shift the Output response schedule so far to the right that with a given income distribution, capacity limits begin to bind. The resulting inflation, income and wealth redistribution, and/or import increases become intolerable after a time.

In one example of this line of thought, the Mexican crisis after 1982 is attributed by some analysts to politically driven expansion by a government which overestimated its spending power from the oil and foreign borrowing booms of the 1970's. Inflation did not accelerate dramatically until after 1982, but before then unsustainable levels of imports were said to be the result.

Elsewhere, as in Sri Lanka and Turkey in the 1970's and in Ghana for two decades after the early 1960's, political disruption reflected itself in large fiscal deficits as politicians grasped at whatever means were available to retain power (usually without much success). Finally, politically directed redistribution plus expansionary fiscal policy in the stagnationist economy of Salvador Allende's Chile stimulated output to the point at which capacity limits bound, triggering inflation and external imbalance. In all these cases, stabilizations ultimately took place, but their basic causes did not come from the economic

sphere.

Structuralist economists are by no means opposed to invoking politics to explain deficits, but also suggest other reasons for them to exist. One is an external shock -- falling terms of trade, an export supply shortfall, or an interest rate excursion on external debt. Such shocks are contractionary; most governments try to offset them in the short run by fiscal means. Causality runs from the external to internal deficit, reversing the usual political link. If the shock proves long-lasting, foreign finance may dry up, forcing attempts at stabilization and general improvement of the economy's trade performance.

During the past decade or so, many developing countries have undergone shocks of this sort. For example, with benefit of hindsight one can argue that the people in charge of policy in the primary product exporting economies failed to foresee the severity of the decline in the external terms of trade that began in the late 1970's. Orthodox macro theory suggests that one should "finance temporary shocks and adjust to permanent ones." The recommendation looks reasonable in a textbook, but is impractical in the real world. One initially tries to ride out a shock by supporting domestic demand, and learns only as the "dark forces of time and ignorance" play their hand that it is "permanent." Sensible policy-makers (as opposed to theory's rational agents equipped with perfect foresight) would do nothing else. Their countries's fiscal deficits widened substantially as a consequence.

Besides external shocks, other structural factors may force fiscal expansion. They include natural disasters, financial

turmoil, ongoing inflation with indexed government debt, and foreign payments obligations.

The disaster scenario is familiar. It requires little comment beyond the observation that relief efforts have both a supply and demand dimension. Not only must commodities be supplied to victims, they must also be in demand. For example, one recent theory (Sen, 1981) attributes famine largely to a demand collapse induced by rising food prices in the face of fixed nominal incomes -- an extreme case of forced saving. Restoring demand involves fiscal deficit spending to transfer income to the groups hit hardest by the price increases.

Financial collapse lies at the root of many stabilizations. One thinks of recent experiences in South America's Southern Cone (Diaz-Alejandro, 1981), the Philippines, Turkey, Kuwait, and elsewhere. There are strong family resemblances among recent financial developments in all these economies.

The typical scenario begins with a surge in speculation involving shares and/or real estate. A bubble is most likely to blow itself up when potential saving is high (say from regressive income redistribution), productive investment outlets do not seem to be available, and (in recent cases) when deregulation of the financial system opens possibilities for manipulation. Under such conditions, ways to generate speculative gains recur throughout capitalism's history. They were promptly rediscovered in the Third World.

During Chile's free market boom of the late 1970's, conglomerates were created by groups with nicknames like the Piranhas and Crocodiles around firms denationalized by the

Pinochet government after the Allende period. In a deregulated financial environment, they promptly borrowed from banks under their control to bid up their own share prices until the stock market crashed. The Philippine central bank itself issued high interest paper to finance Ferdinand Marcos's electioneering, drying up private credit and provoking an output collapse. Kuwaiti investors wrote post-dated checks to cover stock transactions, which then circulated as an alternative means of payment until they had to be called.

Such devices can only function for a time -- a crash is inevitable when confidence in unbacked financial instruments breaks down. The collapse leaves firms and banks with badly compromised balance sheet positions -- there is usually a "debt-deflation" recession, in Irving Fisher's (1933) phrase. The subsequent bail-out involves fiscal outlays and heavy rediscounting by the central bank of commercial bank loans. The government may also issue its internal obligations in exchange for the private sector's foreign debt, and may have direct problems with the balance sheets of public enterprises. Finally, disruption in local financial markets provokes capital flight. It tends to be more serious under deregulated financial regimes in which exchange controls have been weakened or removed.

Most of these interventions increase the state's deficit. For example, Argentina now has a newly coined "quasi-fiscal deficit" which is basically a continuing transfer to commercial banks to enable them to pay high interest rates on deposits to forestall capital flight. In that country and elsewhere, the central bank's wide open rediscount window tempts provincial politicians with

development banks under their thumbs to spend freely. The local banks can always rediscount their loans in the capital, and the consolidated government deficit soars up. Through these and similar channels, financial collapse usually makes the overall fiscal position worse.

The next structural cause of a fiscal deficit is monetary indexation under continuing inflation. Before going into details, it makes sense to digress briefly to discuss the causes of inflation inself.

Ongoing inflationary processes can arise for many reasons -- they are highly dependent on the nature of the economy at hand. Theories about them fall into two classes -- monetarist and structuralist. The monetarist view has already been discussed in connection with the equation of exchange. Rapid growth in the money supply (said to result principally from monetization of the fiscal deficit in an economy where the financial market is not well enough developed to permit the state to borrow from sources besides the central bank) signals excess commodity demand. According to the quantity theory, money growth transforms itself into proportional price increases. The cure for inflation on the basis of this reasoning is to cut demand by reducing the deficit -- a prescription that often is ineffective, as we will see below.

Structural inflation theory argues more from the side of costs than demand, emphasizing distributional conflict and indexation mechanisms. An initial price excursion -- say from a supply shock, a period of forced saving in response to expansionary policy or an increase in local spending power as from an export price increase, or a cost shock such as devaluation --

reduces some income flows in real terms. The shock marks the first stage of inflation, during which distributional losers try to fight back.

Their major weapons are the prices over which they have control. Workers, for example, push for higher nominal wages. Wage pressure drives up production costs; final goods prices rise in turn via mark-ups. Such reactions set the stage for an inflationary spiral, more rapid insofar as individual prices are indexed with short lags to the whole set. When indexation takes over completely, the inflation becomes self-sustaining ("inertial" in the jargon), and the original distributional strife may be forgotten. Recent "heterodox shock" anti-inflation programs in Latin America have been based on a diagnosis of inertial inflation. Their fiscal implications are taken up in section 4.

If inflation is structural, it steadily erodes the real value of the money supply -- the inflation tax begins to bite. One way to avoid this problem is to index money by paying interest on all state obligations. In principle, such a policy is fiscally neutral. The inflation tax cuts demand; interest payments on government debt offset the tax. However, when inflation reaches triple digits, nominal government outlays for interest payments soar. As discussed in the WIDER studies, increased structural deficits because of "monetary correction" have been a bone of contention between several Latin American countries and the IMF. The Fund's recent tendency, e.g. in Mexico, is to accept the point that the part of the deficit supporting monetary correction is not a target for reduction until structural inflation disappears, but the issue is still controversial.

A final structural source of deficits is the need to make a foreign transfer. After the debt crisis of the early 1980's, governments in most developing countries took over the bulk of external obligations, often through financial system bail-outs as discussed above. They now face a double transfer problem -- externally, the country has to run a trade surplus to meet its debt payments, and internally the state has to obtain foreign exchange to meet the payment targets.

To get the dollars it needs, the government either has to tax exporters or buy their proceeds from them. If it takes the latter course, it may borrow from the central bank. In principle, no money creation is involved. As the external payments are accomplished, foreign reserves decline in the same magnitude as government borrowing goes up -- the quantity of base money remains unchanged. However, the fiscal deficit does rise. As with monetary correction, this sort of deficit spending has been a major source of controversy between indebted countries and the Fund.

A final reason for deficit spending -- often proposed by monetarist economists -- is the state's desire to use revenue from the inflation tax in the absence of other feasible sources. This view evidently harks back to political theories of the deficit -- the inflation tax just gives it an economic twist. Since monetarists usually assume that the level of output is fixed from the side of supply, they think that the tax has no effects on the real economy. It just boils down to a transfer from wealth-holders to the state. Since seignorage yield declines with increasing velocity, some inflation rate will maximize fiscal revenue. A

sort of Laffer curve is involved, because inflation also tends to cut back on ordinary tax yields because of payments lags in the system (Tanzi, 1977).

One can try to calculate the inflation rate that maximizes revenue -- it often turns out to be in the double digits. In the Third World, many inflations run at a faster pace. Either incompetent computation or additional factors must be behind such rapid price increases. Widespread indexation which makes the inflation rate highly sensitive to upward shocks and possible macro instability (as along segment ZC in Figure 2) are more likely culprits, or so the authors of the WIDER studies believe.

3. Effects of Deficit Reduction

The foregoing discussion suggests that fiscal deficits have numerous causes -- not all deficits are irrational, and not all add to aggregate demand. Nonetheless, deficit reduction is the sine qua non of orthodox stabilization packages of the type usually proposed by the Bank and Fund. How does such austerity affect the economy's chances of achieving normal policy goals?

Most governments share at least four economic targets:

(1) to maintain socially acceptable levels of capacity utilization and growth, especially in sectors and regions dominated by their political base;

(2) to keep inflation down to a rate tolerable in terms of the country's own history of price increases and social defenses against them;

(3) to alter wealth and income distributions in line with the regime's ideological predilections and political constraints; and

(4) to maintain a degree of self-reliance in trade and

external financial relationships.

The previous section has enumerated some of the macroeconomic shocks that make these goals difficult to attain. In many cases, restrictive fiscal policy only makes the task harder.

To see the effects of cutting fiscal deficits, it is useful to return to Figure 2. The orthodox diagnosis is that an economy must be stabilized because there is too much aggregate demand; standard programs don't pay much attention to other destabilizing forces like those discussed above. Absent the capacity limit, high demand means that macro equilibrium would lie somewhere on the bow-shaped portion of the Output response schedule to the right of the line segment BC. However, the capacity constraint is assumed to bind. Inflation and/or trade imbalance enter to allow output to lie along BC. To obviate the need for these forms of macro adjustment, the output locus should be shifted inward via fiscal restraint. Since the economy is initially in an excess demand situation, output will not fall unless the locus is shifted completely to the left of the capacity limit line.

The WIDER analysts observe that the results from austerity packages are not quite what this theory predicts. Typically, output contraction follows immediately upon imposition of fiscal restraint -- the full capacity use component of goal number (1) is sacrificed. If austerity persists, growth is not rapid either. The reason is that fiscal contraction has no built-in means to assure robust investment demand.

Private investment stagnates for at least two reasons. The standard one is that accelerator mechanisms will not operate while economic activity is being held down. The WIDER studies also argue

that because of structural complementarities, increased public capital formation in developing economies crowds private investment in, not cut by raising interest rates in financial markets along orthodox lines. Fiscal restraint often involves cuts in public projects. If private investment is thereby held down, growth prospects are doubly dimmed -- by austerity itself and its special effects on capital formation.

The record in slowing inflation is not much better. The WIDER results show that insofar as inflation is structural, it will be unaffected by deficit cuts. There may be some slowdown of price increases under special circumstances -- when most markets (including the one for labor) are "flex-price" in Hicks's (1965) terminology and when indexation mechanisms are not widespread.

Such conditions distinctly do not apply in Latin America. In several countries in that region, long periods of low demand have left inflation rates untouched. Only when recession drags on for several years are citizens's income aspirations cut back sufficiently to permit stabilization. In Chile, heavy-handed austerity took four years (1974 to 1978) to cut the annual inflation rate from 600 to 30 percent, meanwhile doubling measured employment to 18 percent (or higher, if one counts people on a government dole) at a real wage 30 percent below that of 1970. Mexican inflation remains stubbornly in the higher double digit range despite five years of monetary and fiscal restraint after 1982.

The situation is somewhat different in a few African and Asian countries, e.g. the Philippines where "only" five or six quarters were required to reduce inflation from 63 percent to

single digits in 1984 and 1985, with real GDP losses of 6.8 and 3.8 percent in the two years respectively. Ghana and India also saw slower inflation from spending cuts. All three economies share flex-price markets for a large proportion of final products and no great degree of indexation for the wage or exchange rate, the major components of producer cost.

Next, there is the external question. After pursuing import substitution, most developing economies become dependent on foreign intermediate inputs to sustain production. Also, most of them need to import around one-half (the non-construction component) of the value of new capital formation. As we have seen, austerity restrains total output and may especially penalize investment demand. Hence, imports drop sharply and the trade balance improves.

There may also be some improvment in exports, in two cases. The first is when a popular consumption item is also exported, e.g. beef in Argentina or rice in Thailand. Then domestic contraction will open up a vent for surplus sales abroad. Similar responses may occur in the handful of developing economies that have significant manufactured exports. Lower domestic demand drives firms to search for markets abroad. Even in recent "miracle" cases (e.g. Turkey), however, exporters have not responded by increasing their own investment. This vent for surplus is ultimately self-closing.

Finally, on capital account, austerity at times slows capital flight by driving up local interest rates. On the other hand, if domestic investment is not strong, the repatriated capital meets no local demand. Financial "sources" exceed "uses" in the jargon

of the flows of funds. The policy lesson is that domestic stagnation does not strongly attract flown capital of (for that matter) other pools of foreign exchange such as the receipts of emigrant workers.

With regard to the income distribution, fiscal austerity often involves scaling down social service activities such as education and health, as well as cutting back on food subsidy and similar programs. Typically, the results are regressive. Direct impacts of other components of stabilizaton packages may alter the distribution in either equalizing or unequalizing fashion. Besides reducing demand in a stagnationist system, real wage cuts are likely to increase income concentration. On the other hand, producer price increases for food or export crops may benefit poor peasants. A mixed bag of such outcomes is perhaps typical of most stabilization programs.

In summary, fiscal austerity improves the trade balance by cutting back on the level of economic activity and thereby imports. Exports in some cases will rise with reduced domestic absorption in vent-for-surplus fashion. Capacity utilization and growth will usually be retarded, especially when investment demand by the private sector responds positively to output increases in accelerator fashion or to public capital formation for reasons of complementarity. Only in certain cases will deficit reduction reduce inflation in a reasonable period of time; even so, output losses are likely to be involved. The distributional effects will as often as not be regressive. Austerity is no panacea in a stabilization crisis. It has to be supplemented with other policies to give acceptable economic results. Some will be of a

fiscal nature, as discussed in the following section.

4. Effects of Specific Policy Moves

The general thrust of this last section is that when an economy is undergoing stabilization involving austerity, its macro equilibrium position may well lie along the stagnationist branch of the Output response curve in Figure 2. As likely as not, its inflationary process will be structural in nature since excess commodity demand and/or reliance on the inflation tax (if it ever existed) has been removed. The question at hand regards the likely effects of fiscal and other measures under such circumstances. The WIDER studies point to several relevant policy linkages, some already mentioned in passing.

First, one must be aware of specific effects of different policies. As we have seen, cutting public investment may also lead private capital formation to decline. Increasing indirect taxes will drive up costs, possibly accelerating a structural inflation. Successful anti-inflation policies are likely to lead to more efficient tax collection as the effects of payment lags on real revenues are reduced. Hence, more fiscal demand contraction may occur than had been planned.

Second, inflation reduction will have other macro effects that have to be taken into consideration. Besides increasing the tax take, Latin American heterodox shock programs which attempted to brake inflation by de-indexing the economy at a stroke were accompanied by shifts in demand for money and commodities. Monetary correction as discussed in section 2 was never completely effective. As a consequence, dramatically slower inflation made velocity fall or money demand rise. Room was opened for money

creation, either by fiscal deficit spending or reserve increases from capital inflows. In Argentina, the latter turned out to be more important in practice, but the story could be different in other circumstances.

Reducing inflation also got rid of the inflation tax. This observation rationalizes the fact that heterodox shocks in both Argentina and Brazil were accompanied by rapid increases in consumer demand (magnified in Brazil by a wage increase that offset previous forced saving). The fiscal restraint implicit in more effective direct and indirect tax collection was offset by the expansionary effect of undoing the erosion of real wealth by steadily rising prices.

Monetarist economists did not anticipate this outcome because they typically postulate supply-side determination of output. In their view, eliminating the tax would only affect transfers from rentiers to the state, not the level of economic activity. Structuralists did not think about it because they viewed the inflation tax as a monetarist ploy. Each side can learn from the other in future anti-inflation programs. They will have to do so if the programs are to succeed, since several interacting responses to slower inflation evidently arise.

Third, prices charged or offered by public enterprises are an important component of fiscal policy in many countries. Changes in prices charged for essential services or food may have strong distributional repercussions. If public enterprises sell intermediate goods, then increasing their prices will have ambiguous effects on inflation. Producers's costs will rise. They may well pass them along to final commodity prices, provoking

structural inflation. On the other hand, the consolidated public sector deficit will be reduced, leading to less state borrowing from the central bank and money creation. The inflation rate may decline for monetarist reasons. Which effect dominates is an important empirical question. Model simulations underlying several of the WIDER studies suggest that the cost linkage may be the stronger.

With regard to prices offered, crop marketing boards often play an important fiscal role, especially in sub-Saharan Africa. Their profit-and-loss position will be strongly affected by the exchange rate, since they must cover the discrepancies between internal prices offered growers (plus internal trade and transport costs) and world prices converted to local currency terms through the exchange rate. By raising marketing board profits (with internal prices unchanged), devaluation becomes a direct fiscal tool. More generally, the performance of the boards is highly dependent on exchange rate policy, since there are limits to the size of the wedges they can drive between internal and external crop prices.

Finally, welfare programs such as food subsidies can have important fiscal and balance of payments effects. With supply elasticities in the usual empirical range, for example, an increased subsidy rate on food purchases will create inflationary pressure unless stocks are run down or imports brought in to meet the additional demand the subsidy creates. If new supplies do not materialize, a forced saving situation like the one along segment BZ in Figure 2 will arise -- prices will go up enough to offset both the direct demand increase and the fiscal injection it

embodies. Despite the subsidy, the real purchasers's price of food could easily increase.

A fourth observation is that fiscal measures should not be undertaken independently of other policy moves. Devaluation, for example, may at times lead to output contraction in developing economies through well-known channels (Krugman and Taylor, 1978). Suppose that one is contemplating combining fiscal austerity and devaluation in a package aimed at improving the trade balance. Assume first that devaluation is expansionary, increasing output. Then it can safely be put together with austerity, since it will offset the latter's contractionary effects discussed in section 3. On the other hand, if devaluation causes contraction, teaming it with fiscal restraint may lead to extreme output loss -- the "overkill" for which orthodox programs are often criticized. Cool consideration of such possibilities makes sense before stabilization is attempted.

Fifth, fiscal measures may substitute for other policies. Devaluation stimulates exports, but so do favorable producer prices and/or subsidies. The latter, directed interventions do not share devaluation's unpleasant economy-wide effects (price inflation via increased intermediate import costs, political visibility, possible output contraction) and may well be the preferred option for that reason.

Finally, the fiscal position will influence private actions in external capital markets. Restrictive policy makes repatriation of flight capital or emigrant remittances more likely by bidding up interest rates. On the other hand, financial incentives alone are not likely to draw external resources toward

a stagnant economy. Growth or a semblance of growth (recall Chile's fragile boom of the late 1970's) are much stronger stimuli than high local interest rates for forex inflows. Once the money has arrived, sensible exchange controls (as opposed to market deregulation) can play some role in keeping it home. Brazil, Colombia, and South Korea are the main capital control success cases in the WIDER sample. They avoided the capital flights that plagued economies with open capital markets such as Argentina, Mexico, and the Philippines.

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