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# MACROECONOMIC STABILIZATION AND PRO-POOR BUDGETARY POLICY IN THE GLOBALIZED ECONOMY

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# Macroeconomic Stabilization and Pro-Poor Budgetary Policy
## in the Globalized Economy

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ABSTRACT

This paper argues that both from an efficiency point of view (maintaining support for an economic reforms promising rapid economic growth) and an equity viewpoint (shielding the poor from the worst effects of a downturn) it is important to append a pro-poor fiscal policy to an economic stabilization program. The paper outlines the basic contours of such a strategy and argues that although the fiscal deficit in many developing countries appears to be unsustainable, a policy package involving tax and expenditure reforms when the economy is not in crisis can help reduce the risk from high fiscal deficits. Furthermore, such tax and expenditure reforms can also be fine tuned to help the poor. The paper also discusses policy measures to shield the poor in anticipation of a downturn and also the contours of a pro-poor fiscal adjustment once it becomes necessary to have macroeconomic adjustment. Given the wide heterogeneity among developing countries, the paper makes policy prescriptions for specific contexts and countries. Finally, the paper considers some policy measures that can be taken at the international level to provide support to developing countries in their efforts to make pro-poor adjustment feasible.

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## I. Introduction

The current phase of globalization has been characterized by increasing frequency of economic crises/downturns for developing countries. Several reasons can be advanced for this including severe drought in an agriculture-dependent economy (such as Zimbabwe) or a secular decline in the terms of trade for a primary exporting country (such as Zambia). However, the most important reason in recent times has been the inexorable march of the developing world to currency boards or dollarization (with consequent surrender of any semblance of an independent monetary policy) or, more likely, to flexible exchange rates preceded by long maintenance of unsustainable pegs.

The fact that exchange rates are excessively volatile in a floating exchange rate regime has been known at least since Dornbusch (1976). During the Bretton Woods era the effectiveness of controls was buttressed by restrictions on international banking legislated in response to the great depression and by the fact that international bond markets had not yet recovered from the defaults of the 1930s. These controls softened the tradeoff between domestic objectives and defence of the exchange rate peg. Though never impermeable and progressively less effective as time passed, they reduced the cost of defending a currency peg and provided breathing space for governments to consult prior to devaluations.

There was a major structural shift following the abandonment of the Bretton Woods system. In the case of developing countries, the costs of excessive exchange rate volatility are now much greater and the conduct of any semblance of an independent monetary policy becomes very difficult[1] as this would require these countries to commit a substantial portion of their foreign exchange reserves, earned through productive activities like exports or remittances, to trying to smooth exchange rate movements. To this should be added the cost of keeping interest rates high in order to attract foreign capital. The resultant output loss has been termed 'quasi-fiscal' costs and has been estimated by Calvo and Reinhart (2000) to be as high as 0.5 per cent of GDP for some Latin American countries.[2]

Economic crises have serious impacts upon the poor. Lustig (2002) argues that except for wars, macroeconomic crises have been the single most important cause of large increases in income (or consumption) poverty. Crises are frequently accompanied by rising income inequality, as well. The improvement in social indicators such as infant mortality rates and

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[1] Thus George Soros wrote in an article in the *Washington Post* on 21 December 1997: 'South Korea and other Asian countries — like Mexico in 1994–95 — are being punished for offences they did not commit. They have inflation and government budgets under control. They are not sinners, but victims of a flawed international exchange rate system that, under US leadership gives the mobility of capital priority over all other considerations. It is simply too easy for banks, governments, businesses and speculators to buy and sell huge blocks of a country's currency in panicky movements. Such flows of capital can throw a country literally overnight into a crisis'.

[2] There are indications that this cost is high for India as well. See Jha (2002).

average years of schooling slows down. An important characteristic of macroeconomic crisis is that as with most covariate shocks, self-insurance, informal insurance, and market-based smoothing mechanisms such as credit are likely to be less effective, particularly for poor people. Problems such as asymmetry of information and lack of adequate collateral, which reduce insurance possibilities for the poor under ordinary circumstances, become aggravated during macroeconomic crises. Not just crises, even macroeconomic downturns and poverty are strongly linked. Fields (1991) estimated that for every percentage point decline in growth, poverty rises on average by close to 2 per cent. Lustig (2002) argues that had Latin America reached the levels of macroeconomic stability achieved by industrial economies, roughly 25 per cent of poor people in the region would have been lifted out of poverty. Further even after the macroeconomic parameters of the economy have recovered after a crisis, there are strong hysteresis effects on the poor (Lokshin and Ravallion 2000). Jha (2001) provides evidence from India suggesting that the severity of poverty rises more sharply than the Head Count Ratio (HCR) during economic downturns. This may not be a transitory phenomenon with the poor augmenting depleted consumption resources by running down assets, both physical and human. Hence, while downturns may be transitory in terms of their impact on macroeconomic parameters, their effect on poverty can be long-term, especially in the absence of an adequate network of safety nets and a pro-poor fiscal adjustment stance.

Our understanding of the channels through which macroeconomic/fiscal adjustment affect the poor is, as yet, not complete. However, two broad channels can be identified. First, there are direct effects including public sector layoffs, freezes on the wage bill and cuts in government expenditures on transfers and subsidies and raises in public sector prices. Second, there are indirect effects such as a drop in aggregate demand and, hence increased unemployment and poverty. If public and private capital expenditure are complementary then a drop in public investment may lead to a drop in private investment as well. This effect could be tempered on two counts. (i) To the extent that Ricardian equivalence holds, the drop in public investment need not lead to an equivalent drop in public investment. However, the evidence in favour of

Ricardian equivalence in the context of developing countries is rather weak. (ii) Further, if the drop in public investment leads to a fall in interest rates, this could stimulate both private consumption as well as investment. However, an increase in taxes, in order to lower the fiscal deficit, as well as restrictive monetary policy that raises interest rates could act as dampers for aggregate private demand, thereby reducing employment and raising poverty.

It becomes imperative then to design a program for recovery from crises with an eye to its implications for the poor. The purpose of this paper is to articulate a rationale and a structure for such pro-poor adjustment policies. The paper is organized around three principal themes. First, I consider policy design in the intermediate run, i.e., in the steady state bereft of crises. Second, I discuss the elements of a response to a crisis. Finally, I outline the design of an international framework supportive of pro-poor adjustment in developing countries. The plan of this paper is as follows. I discuss the background to a pro-poor adjustment policy framework n section II. Section III is devoted to a discussion of measurement of the fiscal deficit and the need to check high deficits. Section IV discusses policy options in the steady state in order to reduce the risk of crises, and section V discusses some elements of a pro-poor fiscal adjustment policy for developing countries. Section VI outlines how policy in regard to international economic relations can be modified to support pro-poor adjustment in developing countries and section VII concludes.

## II. The Background of a Pro-Poor Adjustment Policy Framework

A pro-poor stance to fiscal adjustment in developing countries is desirable not only to insulate the poor from the worst effects of a crisis but also to create a climate conducive for rapid economic growth and sustained reductions in poverty. If the poor regard macroeconomic adjustment as pain without anticipating much subsequent gain, political support for economic reforms and policies for rapid economic growth will wane. Thus a considerable amount is at stake in the design of fiscal policy in developing countries. In both developed and developing countries there is a concern for raising living standards over time, but this need is much more pronounced in developing countries, given the extent and depth of poverty in these countries. In the relative absence or perpetual weakness of institutions to mobilize and direct savings, the role of fiscal policy is crucial in harnessing the resources for development. Since the regulatory apparatus is weak and market signals imperfect, the state has an important role to play in allocating investment funds.

At the same time, and for some of these same reasons, fiscal policy in developing countries is handicapped in its ability to play an activist role. First, the state is a weaker entity politically than in most developed countries. This means that there is often very little consensus on the contours of a tax and expenditure program (Heady 2004). Second, the resources available with the government are meagre since tax bases are small and tax administration weak. Much of tax revenue comes from inefficient and distortionary indirect taxes such as excise duties. International trade is heavily taxed. Effective personal income taxes are low and easily evaded and corporate taxes are high. Even so expenditures routinely, and even increasingly, outpace revenues. With poor credit and bond markets and fiscal expenditures that are inflexible in the downward direction, some of the financing of the resultant deficit spills over onto the external sector and the central bank.

Indeed the poorest among developing countries are caught in an insidious resource trap (UNCTAD 2000). In many of these countries low per capita incomes lead to low savings and, because of this, economic growth is low. With rapidly diminishing official aid and poor private equity flows, external financing of the fiscal deficit in the poorest countries has to rely increasingly on private loans. These are available at increasingly difficult terms, as Harberger (1985) has noted, since the domestic resource cost (often underestimated) of servicing these goes up with additional borrowing. In addition, as UNCTAD (2000) estimates, external shocks have a far more serious effect in the least developed countries than other developing countries. To quote this report: 'The average least developed country economy has, since the 1970s, been exposed to adverse external trade shocks with an impact, in the worst years, more or less double the average of other developing countries'. The fact that the least developed countries can spare far fewer resources to combat the effects of these external shocks, then, exacerbates this problem. External finance is the obvious way to get around this sharp resource crunch. However, such supplies are meagre. Large, stable market economies such as India and South Africa attract considerable capital inflows whereas most poor economies of the sub Saharan region get poor inflows. Both FDI as well as portfolio flows are poor with FDI flows being concentrated largely in resource extraction.[3] The reasons for such poor flows are related to 'costs of asset development, risks which are rooted

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[3] Most of the least developed countries effectively face vertical supply curves of external capital inflows. Various reasons can be attributed toward this. Macro policy disasters such as those in Tanzania have played an important role. Others such as Guinea are just too small. Countries such as Angola do manage to get some FDI in resource extraction. Angola, for example, borrows externally by mortgaging its potential oil revenues but there are limits to this when debt rises to high levels and additional loans can be obtained only at very high interest rates.

in the vulnerability of the least developed countries to shocks, lack of business support services, weak physical, social and administrative infrastructure, and the small scale of projects'. (UNCTAD 2000)

Even within the developing country group there is considerable heterogeneity in experience with respect to the fiscal deficit with differences being more pronounced between the middle and low-income country categories. Thus, low-income countries differ sharply in regard to the depths of their financial markets: in 1999 in Burkina Faso net foreign assets as a percentage of broad money were -1.9 per cent. The corresponding figure for India[4] was 14.3 per cent. Other areas where there are important differences among developing countries include continuity and stability of policy regimes. Thus Zambia, which has had a history of policy reversals, would be associated with higher risk than Botswana and Mauritius, which have had credible and stable policy regimes. The costs of borrowing abroad will typically be higher for countries with frequent reversals of policy stance as the risks associated with lending will go up sharply. Consequently there are sharp differences within countries in the developing country group with respect to the options available for public borrowing in the event of a large fiscal deficit.

## III. Reining in the Fiscal Deficit

The conventional measure of the fiscal deficit as the difference between total government expenditure and current government revenue while being clear, as an accounting concept, is not above controversy as an economic entity. As Tanzi (1993), Hermes and Lensink (2000) and Gemmell (2000), argue this definition[5] is clouded by conceptual as well as procedural ambiguities. These include the asymmetric effects of tax and expenditure categories in economies with high and variable inflation, the strong mutual endogeneity between tax and expenditure categories and, with underdeveloped financial markets and vulnerable external accounts) the limited tools available for financing the deficit. A country with a thin bond market (which is the case in almost all of sub Saharan Africa except South Africa, for example) can hardly afford to issue bonds to cover the fiscal deficit and may have to rely on central bank financing or some such measure. A country with large external debt would, in all probability, be able to finance its deficit externally only by borrowing short term at high rates of interest, making external debt repayment even more difficult and putting pressure on the currency.[6]

Some authors have argued that deficits on current expenditures are more worrisome than those on capital expenditures since the latter contribute toward asset formation. However, this presumes that the assets so formed are appropriate for the country in question, i.e, they are not, for example too capital-intensive or have a high foreign exchange component, for instance.

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[4]   The Burkina Faso figure is taken from IMF (2000) whereas the figure for India comes from the Reserve Bank of India Bulletin (2000).

[5]   The notion of budgetary deficit used should be consistent since differences in measurement can lead to widely varying results (Blejaer and Cheasty 1991, Eisner 1984).

[6]   Buiter (1985, 1993) argues that extant notions of the deficit are incomplete because they do not capture capital gains/losses on public sector assets. Along similar lines Easterly (1999) argues that fiscal adjustment can be illusionary. In particular, this would be the case when such adjustment lowers the public debt but leaves unchanged the net worth of the government. In other words, governments may find ways of maintaining their consumption even when they are actually involved in a process of reducing public debt.

Some other problems in measuring the deficit may be mentioned here. These include accounting for arrears: if, for example, the interest payment on the foreign debt is rescheduled — which is the case in many Heavily Indebted Poor Countries such as Tanzania — should we say that the deficit has gone down? Similarly, if the government delays some payments (often the public wage bill) but it takes in all its revenues does fiscal deficit go down? These questions become particularly relevant during a period of high inflation when delaying payments denominated in nominal terms can have significant impact on the real value of such payments. For example, Angola's government receives large resource revenues from oil but in the recent past it has nevertheless accumulated large wage arrears, the real value of which would have declined rapidly with hyperinflation (Aguilar 2000).

A further problem arises when the fiscal deficit reported is only that of the central government. However, many developing countries have more than one layer of government and have substantial contingent liabilities. Also excluded from the measure of fiscal deficit are the deficits of central banks in some Latin American countries, the deficits of local (particularly municipal) governments in India and the so-called 'oil pool' deficit in India where excesses of payments for petroleum imports over what is collected from consumers is recorded. [7]

The upshot of these arguments is that conventional measures of the fiscal deficit in many developing countries are typically underestimates. Nevertheless a straightforward application of tests of fiscal sustainability to such reported data revealed that in the case of many developing countries either fiscal deficit sustainability or current account stability or both are violated (Jha 2004a).[8]

Both theory and evidence suggest that persistently large fiscal deficits pose real threats to the stability and growth of the economy. Budget deficits, from the national income identity, detract from domestic savings and reduce the resources available for investment and growth (assuming that foreign savings are either not plentiful or imprudent to rely upon — in view of crises, most recently since the late 1990s — or both). Further if there is substantial debt overhang the ability of the government to conduct countercyclical public expenditure policy is compromised. During an expansion tax revenues go up and so can public expenditure, whereas during a recession tax revenues go down and, with large debt servicing charges, little is left for (even essential) public expenditure. Thus fiscal policy ceases to be stabilizing. Furthermore, to the extent that the deficit is financed through monetisation, monetary policy becomes dependent upon budgetary policy and its stabilization potential is compromised. Excessive budget deficits could lead to a combination of inflation, exchange rate crises, external debt crises, and high real interest rates, the last particularly dependent upon the extent of the accumulated debt. The link between inflation and the fiscal deficit is straightforward in theory. A high fiscal deficit leads to increasing monetisation, which leads to high inflation. However, this positive relationship is not easily detectable in the data. One reason for this could be the complex short-run dynamics of high inflationary processes (Calvo and Vegh 1991). However, Catao and Terrones (2001) argue that once these empirical problems are accounted for there is a strong positive relation between deficits and

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[7] On February 28, 2001 India's oil pool deficit alone, the *Economic Times*, March 1, 2001 reported, stood at 0.5 per cent of GDP.

[8] As indicators of this consider the following two examples. During the period 1964 to 1996 Zambia's imports were, on average, 60 times its exports. In 2000 Zimbabwe's fiscal deficit was estimated to be close to 20 per cent of GDP. 'Public debt is rising rapidly, with new debt being issued to meet interest payments (the so-called 'Ponzi' game). Interest payments on domestic public debt are expected to exceed 50 per cent of total government revenues by end-2000, thereby squeezing development and social spending' (EIU 2000).

inflation in developing, particularly emerging market countries. If that is the case, sustained fiscal deficits will lead to higher inflation. Since the inflation tax is a particularly regressive tax, this provides a further reason to curb the fiscal deficit. Furthermore, once a default type situation occurs (most likely on external debt) it becomes even more difficult to establish credibility in capital markets and borrowing must necessarily occur on increasingly difficult terms (Reinhart et al. 2003).

If the public debt could be lowered directly — say through a program of privatisation — there would be less need to reduce public expenditures or raise taxes, *ceteris paribus*. However, with underdeveloped capital markets and general non-marketability of public sector assets, privatisation is, at best, slow and faltering in many of these countries. Hence much of the adjustment has to fall upon the pruning of public expenditures and raising of tax revenues. The critical question to ask, then, is how do we dovetail sensitivity about poverty reduction in a credible program of deficit reduction.

## IV. Reforms to Insulate the Poor from Crises

Efforts to insulate the poor from the worst effects of a crisis and the ensuing necessary macroeconomic/fiscal adjustment must occur before the crisis sets in. It is often said that a crisis is, by definition, an emergent situation where harsh decisions have to be taken and when the crisis is gone there is little incentive to reform. So what can developing countries do (in normal times) to plan for a crisis, particularly to reduce its impact on the poor? A whole plethora of policy issues is relevant here. However, we consider only five of the most important because of paucity of space. These are: i) capital controls; ii) pro-poor tax policy; iii) pro-poor expenditure policy iv) social funds and v) measures to insulate the assets of the poor from the effects of crises.

**Capital Controls and Developing Countries**

One method that has been successfully used by some countries to obviate currency crises is the imposition of capital controls (inward, or outward or both). Neoclassical economists consider barriers to capital flows to be growth inhibiting. However, using the Malaysian and other examples of capital controls Eichengreen and Leblang (2002) argue that the impact of capital controls on growth prospects is ambiguous. The economist's presumption that trade is good for growth suggests a presumption that capital mobility is also good for growth. However, this theoretical presumption holds only in a first-best world — that is when other distortions are absent. Distortions are likely to be even more relevant to capital account than current account liberalization because information asymmetries are intrinsic to financial markets (Eichengreen and Mussa et al. 1998; and Stiglitz 2002) and theory yields no unambiguous prediction of whether opening the capital account is growth enhancing or growth inhibiting.[9]

Eichengreen and Leblang (2002) consistently find that the most robust effect of capital controls operates via the effects of crises. While crises depress growth when the capital account is open, controls neutralize this effect. There is only weak evidence, (mainly for recent periods), that the direct effect of capital account openness on growth is positive provided we control for the indirect impact operating through the disruptive effects of crises.

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[9] Presuming that higher growth leads to lower poverty, *ceteris paribus*, we would regard capital account convertibility to be beneficial to the poor, if it led to higher economic growth.

Hence, the net effect of capital controls is context specific: it is positive in periods of financial stability, when the insulating capacity of controls is precocious, but negative when crises are absent and the direct effect — the positive effect on resource allocation and efficiency — tends to dominate.[10] There appear to be two channels through which capital controls work. One is the standard Keynesian policy of demand reflation implemented through expansionary monetary and fiscal policies. The other is the removal of the substantial uncertainty about the financial system and the exchange rate.[11] The Malaysian experience with capital controls is a good example of the working of these two effects.

Thus capital controls can be used to tide over temporary problems but cannot be used as even a medium-term policy measure. This must involve strengthening domestic financial markets and adopting an appropriate exchange rate regime. I do not discuss these here since they are outside the scope of this paper.

**Tax Policy to improve fiscal balance in Developing Countries**

What tax reforms should developing countries institute in order to place the evolution of their budgetary deficits on a sustainable path and reduce the risk of slipping into a crisis? Although fiscal deficits are high and often unsustainable, expenditure/GDP ratios in many developing countries are 5 to 10 per cent below OECD levels: thus tax reform is rightly a matter of pressing concern. Table 1 reports some evidence on tax/GDP ratios in select developing countries.[12]

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[10] In light of this argument it is relevant to ask whether a celebrated recent case of capital controls — the Malaysian case — worked. Kaplan and Rodrik (2001) address this issue. On 1 September 1998 Malaysia imposed capital controls and reflated the economy through loose monetary and fiscal policy bringing down interest rates and fixing the exchange rate with respect to the dollar. Second generation models of currency crises suggest that a country can be faced with creditor panic and a run on reserves even when it has strong fundamentals. In these situations, a temporary suspension of capital account convertibility can stop the rush to the exits and provide time for policymakers to take corrective action — it can rule out the bad equilibria associated with the second-generation models. But the risk is that capital controls can prove ineffective, undercut market confidence even further, and be used to delay needed adjustment. Kaplan and Rodrik argue that it is not correct to compare Korea, Thailand, and Malaysia on 1 September 1998. This is because in early September 1998 neither Korea nor Thailand faced an imminent financial crisis whereas Malaysia did. So the relevant comparison is between Malaysia after 1 September 1998 and Korea/Thailand at the start of their financial crises several months earlier. The Thai crisis began in September 1997 and the Korean in October 1997. On 1 September 1998 the process of economic recovery was well underway in Korea and Thailand. Malaysian controls produced better results than the alternative on almost all dimensions. On the real side, economic recovery was faster and employment and real wages did not suffer as much. On the financial side, the stock market did better, interest rates fell more and inflation was lower. This is particularly commendable because all expectational factors were against Malaysia at that time. Malaysian policy was more successful in accomplishing an immediate reduction in interest rates, stabilizing the currency and stemming financial panic.

[11] For a parallel view advocating insulating the home economy from international capital flows see Epstein (2002). Epstein argues (in the South African context) that rather than loosening the exchange control system, the RBSA and Ministry of Finance should scrap inflation targeting and adopt a monetary policy that targets employment growth subject to an inflation constraint. Existing exchange controls should be enforced more strictly and transactions taxes and other speed-bumps should be used to insulate the South African rand.

[12] Since the data for the period 1999–2002 come from different sources they are not comparable to the data for the earlier period. Hence unweighted averages for this period are not reported.

**Table 1: Tax revenue as percentage of GDP**

| | 1985 | 1988 | 1991 | 1994 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|---|---|---|---|---|
| Argentina | 15.62 | 9.26 | 11.19 | 14.88 | 13.60 | 13.82 | .. | 17.3* | 16.9* | 16.1* |
| Cameroon | 22.73 | 17.69 | 16.88 | 10.19 | .. | 15.39 | 15.7 | 18.8 | 20.6 | 18.5 |
| Chile^ | 28.36 | 22.55 | 22.34 | 22.57 | 23.34 | 22.99 | 22.51 | 19.69 | 20.15 | 20.06 |
| Colombia^^ | 12.02 | 12.85 | 14.10 | 11.40 | 12.56 | 11.74 | 12.34 | 15.39 | 15.58 | 16.04 |
| Dominican Republic^^^ | 11.01 | 14.66 | 11.39 | 16.40 | 17.10 | 16.92 | .. | | 16.93 | |
| Egypt, Arab Rep+. | 37.12 | 33.22 | 34.40 | 40.37 | 28.95 | .. | 22.2 | 21.2 | 20.7 | 21.1 |
| India** | 13.96 | 14.23 | 14.62 | 12.81 | 12.37 | 12.11 | 14.2 | 14.5 | 14.4 | 15.8 |
| Indonesia*** | 20.05 | 15.35 | 16.44 | 17.35 | 16.12 | 16.28 | .. | 21.24 | | |
| Malaysia | 30.15 | 25.72 | 28.78 | 29.26 | 25.43 | | | | | |
| South Africa~ | 26.15 | 25.77 | 26.88 | 26.34 | 25.96 | 26.93 | 25.0 | 24.6 | 25.9 | 25.3 |
| Sri Lanka# | 24.36 | 21.78 | 22.65 | 20.43 | 19.36 | 17.90 | 18.25 | 14.5 | 14.6 | 13.99 |
| Thailand## | 16.05 | 17.21 | 20.00 | 19.43 | 18.68 | 16.22 | 15.98 | 15.15 | 16.14 | 17.05 |
| Zimbabwe@ | 29.61 | 28.82 | 26.50 | 27.88 | .. | .. | 29.2 | 28.1 | 26.6 | 28.0 |
| Unweighted average for these countries | 22.09 | 19.93 | 20.47 | 20.71 | 18.80 | 17.03 | 17.26 | | | |

*Source:  Global Development Network Database* unless otherwise stated

N.B.   * Source: Central Bank of Argentina website

   $ data for 1999 onward refer to financial year 1998–99, 1999–2000, 2000–01 and to total revenue and grants. Source: African Development Bank website

   ^ Figures for 2000, 2001, 2002 computed from data available on Central Bank of Chile website (reference only to Central government)

   ^^ Data for 2002–02 from International Financial Statistics, IMF.

   ^^^ Data for 2001 from International Financial Statistics, IMF.

   + Data for 1999 onwards refer to financial years 1999–00, 2000–01, 2001–02 and 2002–03. Source: African Development Bank website.

   ** Last four data points for India refer to financial year (1999–00, 2000–01, 2001–02 and 2002–03). Source: Economic Survey, Government of India, 2002–03.

   *** Data for 2000 from International Financial Statistics, IMF.

   ~ Data from 1999 onward refer to financial years 1999–00, 2000–01, 2001–02, 2002–03. Source: IMF and Reserve Bank of South Africa.

   # Data from the website of The Central Bank of Sri Lanka.

   ## Data for last three years from International Financial Statistics, IMF.

   @ Source: IMF and other projections as reported in OECD http://www.oecd.org/dataoecd/45/43/32411615.pdf

The data shows wide variation both over time and across countries.  During the period 1985–99 Chile, Malaysia, Egypt and South Africa were able to maintain tax/GDP ratios at OECD levels. During 1999–2002 South Africa was able to maintain this momentum whereas tax/GDP ratios in Chile and Egypt started slipping. Other countries have had much lower tax/GDP ratios. Sri Lanka has experienced a sharp reduction in tax/GDP ratio since the mid 1980s and India a less severe one. Thailand's tax/GDP performance improved until the 1997 crisis and then suffered a considerable setback. Even so its tax/GDP ratio was still better than India's. The unweighted average of the tax/GDP ratios for these countries shows a downward trend between 1985–99. There appears to be considerable scope for improvement of the tax/GDP ratio, especially in the countries with low values and/or declining trends.

I ran a panel fixed effects regression of the log of the tax/GDP ratio against the log of per capita real income, a time trend and a constant for these countries over the period 1985–98. The results are revealing.

Ln (tax/GDP) =   0.978 – 0.01064* time trend + 0.263401 * ln PC real income

$\quad\quad\quad\quad\quad$ (1.85)   (-4.19) $\quad\quad\quad\quad\quad$ (3.83)

t- statistics are in parenthesis. The constant is significant at 6.6 per cent and the time trend and per capita real income at 1 per cent.  The *F*-statistic is highly significant. Thus there appears to be a declining trend in the response of tax collection. The elasticity of the tax/GDP ratio with respect to per capita real income is significant and has the right sign but is small in magnitude, although it is larger than the coefficient on the time trend. It would appear, then, that without substantial tax reform, the tax/GDP ratio in developing countries is unlikely to reach the levels required to finance expenditures associated with OECD or middle-income type countries and maintain debt sustainability.

The agenda for tax reform in developing countries has been widely discussed in the literature; see for instance Shome (1995) and World Bank (1991). Tax reforms are needed for increasing the tax/GDP ratio, limiting distortions in order to reduce some impediments to rapid economic and lowering disincentives to save, work, take risks and invest.   Fine-tuning the tax structure to make it progressive should be looked upon as a component of an overall program of tax reform. It is widely agreed that existing patterns of taxation in developing countries are not only insufficiently progressive but also create distortions reducing potential economic growth, thereby stifling already scarce funds for poverty alleviation. The primary purpose of tax collection has to be the generation of sufficient revenues.  However, in the case of many developing countries there appears to be a permanent gap between public expenditure and tax revenue.  Moreover, most tax revenues in developing countries are collected from distortionary and regressive taxation such as excise and import tariffs. Income taxes have small bases and are, in most cases, subject to considerable evasion. Partly as a result of this, direct taxes get skewed in favour of corporate taxation. In many developing countries corporate income is taxed at more than one rate and the highest corporate tax rate is higher than the highest income tax rate. This creates an avenue for inter-tax arbitrage as well as evasion. High and arbitrary import tariffs have unintended consequences for effective rates of protection and industrial growth.  One of the most regressive and distortionary taxes is the inflation tax, which countries in crisis routinely face during phases of high inflation. Further, tax structures in developing countries are unnecessarily complex with a multiplicity of taxes, rates and exemptions. Tax administration becomes difficult, as a consequence.

The literature has evolved fairly wide consensus on the direction of reforms for developing countries.  The emphasis of the tax structure on direct taxation should increase. The income tax base should be enlarged and the number of rates brought down with substantial cuts in the top marginal rates. There should be a flat corporation tax rate and this rate should be harmonized with the highest income tax rate. The use of the tax system for special tax preferences should be scrutinized since using the system to provide tax incentives usually causes a serious drain on the national exchequer by conferring windfall gains on existing activities or by shifting resources to tax-preferred activities. A uniform broad-based consumption tax such as the VAT with few exemptions (for goods and services consumed in disproportionately large amounts by the poor), and few rates.  These could be supplemented with excise duties on environmental bads or 'luxuries'.[13] Peak tariff duties and the dispersion of tariff rates are to be brought down gradually.  Such tax reforms have the potential of

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[13] In federal countries there is the further issue of how to harmonize VAT across states.

improving the allocation of resources and enhance prospects for economic growth. They are also administratively simpler. If the tax base admits few exemptions and there are fewer rates costs of compliance and monitoring are probably lower. A significant exception to this is the VAT, which requires fairly sophisticated account keeping in order to net out input costs and exempt exports. Such expertise may be lacking in many developing countries. The credibility of the tax regime is also important and tax reforms should aim for a stable tax environment. Further, tax reform should be well coordinated and across the board changes may necessitate policy reversals. A tariff cut, for example, should be accompanied by an upward revision of VAT rates, failing which there may be a drop in revenue.

How successful have these tax reforms been in raising revenue? Given the high tax buoyancy and elasticity of tax structures in many developing countries (reported in Tables 4 and 5) one would expect that tax reforms that raise the rate of growth of the economy will in general, lead to substantial incremental revenues. Direct evidence for the case of Ghana is available in African Economic Research Consortium (1998). This study examines the revenue impact of the 1983–93 tax reforms in Ghana. The estimated buoyancies of the overall tax system, income tax, sales tax and import tax were all higher than their respective elasticities indicating that tax reform had played a significant role in tax revenue growth. In particular, the expansion of trade following devaluation and tariff reforms appear to have contributed significantly to revenue growth. In a similar vein Munoz and Cho (2003) study the impact of introducing a comprehensive VAT in Ethiopia and argue that the tax has not had an adverse impact on the poor and is progressive in its incidence. Further, the introduction of the VAT has been associated with a substantial increase in public sector revenue over the medium term, but not in the short run. Hence, carefully designed tax reforms do hold out the promise of raising revenues, however, such reforms must be carefully nuanced. In particular, much attention needs to be paid to the sequencing of tax reforms. Large cuts in tariff rates should not come at the same time as harmonization of indirect taxes into a VAT. The latter has often been associated with a loss in revenue and the two tax reform proposals might create a short-run budgetary crisis by reducing revenues substantially.[14]

Given the uncertainty in the revenue response of tax reforms a case can be made out for creating a fund that might help maintain public expenditure in key areas at reasonable levels without running high public debt. Some countries, particularly those that are dependent on revenues from resource exports, have established stabilization funds. The stabilization fund is augmented during periods of resource price booms and the accumulated funds are used for stabilizing state spending during years of recession or unfavourable conditions for resource exports. Several countries — both developed and developed — have created stabilization funds. Venezuela, Colombia, Kuwait, Nigeria, Norway, Chile and the US state of Alaska have used such funds largely for stabilizing expenditures in the face of fluctuating resource prices. Some other countries (Kiribati, Kuwait, Oman, Papua New Guinea, Alaska and the Canadian province of Alberta) have created future generation funds. Hong Kong, Singapore, Estonia and South Africa have created budget reserve funds in which revenues are accumulated during years of state budget surpluses as well as additional sources of state savings such as revenues from privatization. Recently a stabilization fund has been initiated for Russia and one is being contemplated for Iraq. Table 2 summarizes the principal characteristics of stabilization funds in the two developing countries where they have been successful.

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[14] Piecemeal and inappropriately sequenced tax reforms can sometimes have adverse consequences for tax revenue. Thus Chu et al. (2004) show that such tax reforms reduced the average tax/GDP ratio for a sample of 34 developing countries over 1975–95 (roughly) by about 1 per cent of GDP whereas it rose by about 1.5 per cent of GDP over the previous twenty years. Further, the share of direct taxes in total tax revenue also fell.

**Table 2**
**Successful Stabilization Funds in Developing Countries**

| Fund | Copper Stabilization Fund of Chile | Macroeconomic Stabilization Fund of Venezuela |
|---|---|---|
| Year of creation | 1985 (no receipts before 1987) | 1998 |
| Purpose | Stabilization of the real exchange rate and state budget revenues in face of fluctuations in world copper prices | Protection of state budget and economy against oil price fluctuations |
| Formation | Under conditions of central government budget surplus | From central government budget, regional government budget and oil companies |
| Size | $1.7 billion by January 2000 | SFA – $27.1 billion (1999); CBRF– $6.1 billion (1999) |
| Utilization | Government can withdraw funds when copper prices are below long-run levels. At the end of the 1980s, the fund was used to repay government debt of the Bank of Chile and to subsidize domestic gasoline prices. | Only in the short run to be repaid at times of budget surplus. All three levels of government have the right to access it. |
| Management | Government of Chile | Utilization of funds by permission of Government of Venezuela, Management by Central Bank |
| Specific Features | Government operates according to a permanent rule, defined in law | Being reformed to permit use in medium term. |

*Source*: Adapted from Zolotareva, A. et al. (2002)

Stabilization funds have helped Chile smoothen the fluctuations in public expenditure following from changes in copper prices. Venezuela's fund has helped stabilize state finances. Thus stabilization funds offer an opportunity for pursuing counter-cyclical fiscal policy. During a contraction, then, such countercyclical fiscal policy can be used for maintaining pro-poor public expenditures. However, the developing countries that have been able to successfully create such stabilization funds are those with large endowments of one or more natural resource for which there is substantial demand in international markets during normal times, e.g., copper in the case of Chile and petroleum in Venezuela. Since most developing countries do not have such resources, stabilization funds are out of their reach. Further, most of these countries do not have budgetary surpluses during normal time to enable them to earmark some portion for stabilization funds. However, some amount of earmarking of budgetary surpluses, as and when they occur, as well as international donations can help create stabilization funds which may help arrest the slide in pro-poor public expenditures during downturns or periods of structural adjustments. Thus, although at present stabilization funds are of limited use in a program of pro-poor fiscal adjustment for most developing countries and cannot be a substitute for an appropriately sequenced program of tax reforms, there exists a potential case for creating such stabilization funds.

**Public Expenditure Reform in Developing Countries**

As Table 3 below indicates public expenditure in developing countries — even those with low tax/GDP ratios — has not been excessive. In fact if one nets out debt servicing charges expenditure/GDP ratios are likely to be even lower. In, India, for example, interest rates on government borrowing rose sharply after financial sector reforms were instituted beginning 1992 so that internal debt service charges have increased sharply. In 2002–03, for example, interest payment on central government debt was 34.5 per cent of total revenue expenditure

of the Government of India, compared to just 12.8 per cent for a major item like defence expenditure.[15] In the case of Indonesia, public expenditure did not go up unduly even after the economic crisis of the late 1990s. The unweighted average of the expenditure/GDP ratio does not show an upward trend.[16]

**Table 3: Public Spending as a percentage of GDP**

|  | 1985 | 1988 | 1991 | 1994 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Argentina* | 17.68 | 10.81 | 11.41 | 15.21 | 15.26 | 15.41 | .. | 18.6 | 18.2 | 16.9 | |
| Cameroon$ | 20.89 | 17.43 | 22.17 | 12.77 | .. | 13.88 | 18.9 | 17.4 | 18.3 | | |
| Chile^ | 30.40 | 23.17 | 21.01 | 20.95 | 21.21 | 22.53 | 23.93 | 26.7 | 27.1 | 26.9 | |
| Colombia^^ | 14.06 | 13.70 | 11.53 | 12.58 | 16.09 | 16.62 | 18.76 | 19.6 | 20.6 | 20.7 | 20.6 |
| Dominican Republic$$ | 12.55 | 16.34 | 11.08 | 17.08 | 16.68 | 16.29 | .. | | | 17.00 | |
| Egypt+ | 39.91 | 36.60 | 31.92 | 37.36 | 30.64 | .. | 26.1 | 26.8 | 26.5 | 27.4 | |
| India++ | 16.42 | 17.56 | 17.03 | 15.26 | 15.21 | 14.95 | 17.7 | 18.0 | 18.5 | 20.0 | |
| Indonesia% | 20.47 | 18.28 | 16.01 | 15.46 | 15.98 | 17.82 | | | 24.7 | | |
| Malaysia | 29.04 | 27.94 | 29.24 | 24.52 | | | | | | | |
| South Africa~ | 29.24 | 30.60 | 30.62 | 32.27 | 29.40 | 29.83 | 27.0 | 26.6 | 27.4 | 26.6 | 26.7 |
| Sri Lanka# | 33.36 | 31.08 | 29.29 | 27.19 | 25.69 | 24.93 | 24.06 | 26.65 | 27.41 | 25.39 | |
| Thailand## | 20.87 | 15.80 | 15.01 | 17.12 | 20.48 | 22.51 | 24.92 | 17.35 | 17.73 | 17.6 | 16.7 |
| Zimbabwe@ | 33.62 | 33.72 | 31.88 | 29.59 | | | 38.7 | 48.8 | 34.7 | 38.2 | |
| Unweighted Average | 24.5 | 22.54 | 21.4 | 21.33 | 20.66 | 19.47 | 21.87 | | | | |

*Source: Global Development Network Database*, unless otherwise stated.

N.B.

\* Figures for 2000–02 computed from data available on Central Bank of Argentina website. Variable defined as National Primary Spending

$ data for 1999 onward refer to financial year 1998–99, 1999–2000, 2000–01.
Source African Development Bank website

^ Figures for 2000–02 computed from data available on Central Bank of Chile website.

^^ Last four data points from International Financial Statistics, IMF.

$$ Data for 2002 from International Financial Statistics, IMF.

+ Data for 1999 onwards refer to financial years 1999–00, 2000–01, 2001–02 and 2002–03.
Source: African Development Bank website.

++ Last four data points for India refer to financial year (1999–00, 2000–01,2001–02 and 2002–03) and refer to revenue expenditure. Source: Economic Survey, Government of India, 2002–03.

% Data for 2001 from International Financial Statistics, IMF.

~ Data from 1999 onward refer to financial years 1999–00, 2000–01, 2001–02, 2002–03.
Source: IMF and Reserve Bank of South Africa.
Data for 2003 from International Financial Statistics, IMF.

# Data from the website of The Central Bank of Sri Lanka.

## Last four data points from International Financial Statistics, IMF.

@ Source: IMF and other projections as reported in OECD http://www.oecd.org/dataoecd/45/43/32411615.pdf

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[15] See Ministry of Finance (2003).
[16] Since the data for the period 1999–2002 come from different sources they are not comparable to the data for the earlier period. Hence unweighted averages for this period are not reported.

I ran a panel fixed effects regression of ln (exp/GDP) against ln (per capita real income) and a time trend using annual data for the period 1980–98. The results are as follows:

ln (exp/GDP) = 3.55 – 0.00635 * time trend – 0.05965 * ln (pc real income)

$\qquad\qquad$ (6.504) $\quad$ (-2.888) $\qquad\qquad$ (-0.837)

t-statistics are in parentheses below the respective coefficient. The time trend and the constant are strongly significant. The coefficient on per capita real income is insignificant. The *F*-statistic is strongly significant.

Thus, with growth of per capita income tax/GDP ratios tend to increase whereas there is no significant change in the expenditure/GDP ratio. The effect of time is to reduce both tax/GDP and expenditure/GDP ratios.

Over the medium term, as globalization proceeds apace the demands for higher public expenditure are likely to grow (Rodrik 1998).[17] Hence, over the medium-term a credible solution to the fiscal deficit problem must involve tax reforms so as to get higher tax/GDP ratios. There does not seem to be much room for reduction of public expenditure in many developing countries although some opportunities for public expenditure switch exist.

**Making Tax Reforms in Developing Countries More Pro-Poor**

There is some consensus in the literature that tax structures in developing countries are not particularly progressive. Chu, Davoodi and Gupta (2004) report results on tax incidence from various surveys over the years and find that (i) so far as the overall tax system is concerned only 13 of the 36 surveyed are progressive, seven are proportional, seven are regressive and the rest are neutral or insignificant. (ii) Income taxes were progressive in 12 of the 14 cases studied whereas indirect taxes were broadly regressive. However, the progressivity of direct taxes appears to have fallen over time in eight cases. This study surveyed both general equilibrium and partial equilibrium structures — however, they are primarily studies of average, not marginal incidence. Nevertheless, there appears to be considerable scope for improving the progressivity of tax structures and making them pro-poor.

A brief taxonomy of the extant literature's view on how to fine tune tax reforms to make them pro-poor is presented in Table 4. As is evident, many of the results are context specific. At the very least, one would need information on the structure of demand of various income groups in order to assess the impact on the poor of select tax reforms. A general result seems to be that items that are consumed in disproportionately large amounts by the poor and exportables should be taxed at lower rates. If the country in question is going in for a VAT then corresponding exemptions or lower rates of VAT are called for.

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[17] Rodrik argues that as countries open up they become more prone to external shocks. A democratic polity must respond to it. Whereas in developed countries this takes the form of social safety nets, in developing countries with inadequate governance structures this is likely to take the form of wage subsidies for employers or direct public employment.

# Table 4
## Summary of Tax Reforms and their Impact on the Poor

| Author(s) and countries studied | Principal Results |
|---|---|
| Chen et al. (2001) for Uganda | The authors conduct a welfare dominance analysis of tax incidence in Uganda. They discover that the tax structure was progressive before the reforms and remained so after the reforms. Export taxes on coffee, one of Uganda's main exports, remained highly regressive, as the burden of the taxis shifted to relatively poorer rural farmers. The pay-as-you-earn tax remains the most progressive tax, as it applied to the formal sector, where the non-poor are employed. Substituting value-added taxes for sales taxes does not necessarily worsen the welfare of the poor, since most goods consumed by the poor were zero-rated. |
| Younger et al. (1999) for Madagascar. | Most taxes are progressive, with the exception of kerosene taxes and export duties on vanilla. It proposes that a movement away from trade taxes and towards broadly-based value-added or income taxes would be both more equitable and efficient, since these would apply to the formal sector where the non-poor are employed. Further, taxes on petroleum (except those on kerosene which is heavily used by the poor) are highly progressive and also provide a good tax handle for the government. |
| Younger (1993) | He uses Ghana's 1988 Living Standard Survey. He discovered that broad-based taxes are either proportional (sales taxes) or progressive (income and property taxes). A greater reliance on broad-based taxes will improve both equity and efficiency. Petroleum taxes are proportional or slightly progressive, even after taking into account the intermediate effects such as the cost of public transportation. |
| Gibson (1998) for Papua New Guinea | He discusses the case for introducing a VAT. Instead of removing existing distortions by virtue of being a uniform consumption tax, VAT will introduce new distortions through the proposed 'merit good' exemptions on financial services, health and educational services and public road transport. Exemptions from VAT should be on items consumed more heavily by the poor. These include axes, bush-knives and garden tools, school fees and children's clothing, pots and pans, salt, rice and tinned fish. |
| Alderman and del Ninno (1999), South Africa. | They use the World Bank's 1993 Living Standard Development Survey and assess VAT exemptions and their targeting of the poor. They estimate a welfare cost to revenue benefit ratio which gives a cost benefit ratio to assess commodity-specific exemptions. They find that maize is the best choice for low rates from the standpoints of equity, efficiency and the impact on the nutritional value of the poor. Low tax rates on beans, sugar and kerosene are beneficial from the viewpoint of equity. Lower tax rates on fluid mil and meat are not good instruments for achieving equity or nutritional objectives. |
| Ahmad and Stern (1984) use 1979–80 data for India and Pakistan. | They discover that taxes on cereals, fuel and light are less socially desirable relative to a tax on clothing for social welfare functions that are averse to inequality. |
| Ahmad and Stern (1987, 1991) for India and Pakistan. | They examine the impact of replacing a number of direct and indirect taxes on consumption by a simple proportional VAT. Using 1979-80 data the authors find that switching to a VAT would be equivalent to reducing the real expenditures of the poorest rural households by 6.8 % and increasing those of the richest rural households by more than 3 %. Thus welfare of the poor would be reduced if a proportional VAT replaced existing indirect consumption taxes. In the case of India at higher levels of inequality aversion, import duties are the most attractive form of indirect tax revenue. In the case of Pakistan for higher levels of inequality aversion wheat and pulses are not desirable candidates for sources of additional tax revenue whereas housing, fuel and light are. A good whose consumption is concentrated among the poor, that has a low shadow price and is less responsive in terms of revenue increase, is a less desirable commodity for a tax increase, *ceteris paribus.* A single rate VAT seems inappropriate for developing countries since a number of agricultural sectors cannot be covered under a uniform VAT. They discuss the introduction of a tiered-VAT system with zero rating for exports, exemptions for the agricultural sector, a standard rate of 10 % and a luxury rate of 20 %, together with excises. Such a VAT could be revenue-neutral without having a progressive impact on income distribution. |

**Pro-Poor Expenditure Reform in Developing Countries**

Just as it is important to understand how to make tax reforms pro-poor, it is important also to understand what and how government expenditures need to be adjusted. The impact of public expenditure is usually ascertained through an incidence analysis of the ex-post variety. The question typically asked is given some tax or public expenditure i) who pays or receives the benefits provided through public spending; ii) how much does everyone receive in accounting terms; iii) how much does everyone receive when taking into account behavioral responses to taxes or the free delivery of public services; iv) what are the indirect effects of the program. To answer these questions we need data that show who pays taxes or benefits from public services, by how much and what are the other characteristics of tax payers/beneficiaries. These ex post analyses enable the researcher to figure out the actual distribution of the amount budgeted as a tax receipt or a public expenditure and helps decide whether public expenditures are 'worth their cost'. This enables one to decide whether the expenditure adjustment/reform envisaged should be pursued.

However, a problem with this methodology is that only existing taxes or public programs may be analyzed in this way. An important question is how to evaluate not what does exist but what might exist. This has been labeled benefit incidence analysis.[18] The question asked is what if some features of the tax system or public spending were modified. How different would it be for individual households from the initial situation or the 'status quo'? Such an analysis is marginal because it is meant to capture differences from the status quo. Also it is behavioral because of the need to generate counterfactuals.

Addressing behavioral issues — especially labor supply and income generation — is important. But such modeling is difficult in the case of developing countries for various reasons. First, direct transfers to households, whether positive or negative, are limited. Second, the functioning of the labor market may make the concept of labor supply somewhat artificial. In particular, the distinction between formal and informal labor markets is critical with jobs in the former being subject to some form of rationing in most developing countries. Both these issues will apply more strongly to the poorer sections of society.[19]

Delineating expenditure adjustments according to their effects on the poor in developing countries cannot await the development of ex-ante analysis. A good rule of thumb would be to delay/reduce the cuts in public expenditure on goods and services that are directly or

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[18] A useful review is Demery (2002). An important caveat when analyzing benefit incidence studies is that standard methods use quantile average shares of benefits whereas analysis of policy changes should be done at the margin. However, Younger (2003) argues that the standard method gives a good first-order approximation to the marginal approach in most, but not all, cases. The standard approach works better with individual, as opposed to aggregated, data. Further methods that rely on differences over time have large standard errors.

[19] In the case of developed countries the procedure for modeling labor market responses has been based on Hausman (1980). Recent important examples include Blundell and MacCurdy (2000), Blundell et al. (2000), Keane and Moffitt (1998) and Bourguignon (2002b). The work for developed countries visualizes a social planner maximizing a utility function with consumption and leisure as arguments. The utility function has a general parameter and an idiosyncratic parameter to characterize preferences. This is maximized subject to a budget constraint, which has wage income, labor and net transfers as arguments. This is then solved to yield a labor supply function, which is non-linear and equal to zero for some subset of its arguments. Estimation tries to minimize the role of idiosyncratic preferences. But this estimation is difficult because of the non-linearity of the budget constraint and possible non-convexity of the tax-benefit schedule. Some corner solutions are also possible. The labor supply function is then incorporated into a structural labor market in order to simulate the effects of various policy changes.

indirectly of high importance in the poor's budget. This would include (coarser types of) food, fuel and agricultural subsidies in most cases.

An example of a successful of a general (non-targeted program) comes from Chile (Schkolnik 1992). During 1973–90 there was a sharp drop in government expenditure and Chile adopted the neo-liberal doctrine of development in a rather pure form. A number of social programs were cut. However social programs, to the extent they were retained, focused exclusively on the services of the poor. These were services that the middle class or the rich rarely used and the private sector found difficult to supply.

Even within the broad category of basic services, however, the selection of programs will have to be sensitive to the type and severity of deprivation. When there is widespread malnutrition a program of subsidized nutritional supplements would be more effective than an elementary education scheme. In the middle of a drought a food for work program is likely to be the most effective antidote for widespread deprivation. Hence some thought would have to be given to the selection and actual design of the programs to retain in case public expenditures have to be pruned.

However, as in the case of tax adjustments, the decision on what is more of a pro-poor expenditure cut will be country and context specific (van de Walle1995).

### Problems of Targeting

Some economists have argued that so long as targeting is effective a general rule like directing public expenditure towards basic services need not be followed. However, there is no guarantee that targeting will be effective — the poor may be excluded or there may be leakages to the non-poor. Further the costs of targeting may be high. These include the initial screening costs and the costs of delivery to the poor to the exclusion of the non-targeted group and the incentive effects of targeted programs, as the targeted groups alter their labour supply and private transfers to them may be reduced.[20] However, some targeted programs have been known to be effective. For instance, poor workers have self selected themselves into employment guarantee schemes like the Employment Guarantee Scheme (EGS) in Maharashtra, India. This scheme pays less than the minimum wage and is geared toward smoothing the impact of the agricultural crop cycle. In some cases it is possible to incorporate an element of targeting in a general subsidy program: a food subsidy on the coarser varieties of grain (consumed in disproportionately large amounts by the poor) would have an element of targeting built into it. Proponents of this line of action argue that, in general, programs targeted toward the poor become 'poor programs', political support for which may be meager. Hence targeting may be politically unsustainable in some cases.[21]

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[20] To be sure private behaviour responds to public action irrespective of whether the program is targeted. However, this problem may be more pronounced in the case of targeted programs (van de Walle 1995).

[21] However, this conclusion may change if the targeted program gives indirect benefits to the non-targeted groups. The EGS, for example, stems the flow of economic migrants into Mumbai thus reducing space pressures on the city. This would add to its political appeal. However, such political benefits are unlikely to be extended to targeted food subsidy to the poor. In general, if the two errors of targeting are minimal and administrative costs are low, targeting may yet be the preferred route, however no general recommendation along these lines can be made since whether these outcomes are realized is likely to be highly context specific.

When pruning public expenditures there is naturally an inclination to avoid cuts in public subsidies geared towards the poor. During crises, both consumption and production get hit.[22] However, there is some controversy about the impact of targeted subsides (Cornia and Stewart 1995). First, one has to be clear about the objective of the subsidy. In the case of consumption subsidies — say that on food — even a general subsidy has some degree of targeting built into it depending on which food items are subsidized and the consumption pattern of the poor. On the other hand, the costs of a targeted program, including the costs of verification as well as administration, may be high. Cornia and Stewart (1995) argue that a targeted scheme encounters two problems — one of including the non-poor ($E)$ and the other of excluding the poor ($F$) Let NP represent the total non-poor population and $NP^c$ the number of non-poor covered by the intervention. The proportion of the non-target population that is covered by the program $E' = (NP^c/NP)$ is one indicator of the failure of targeting. It is also possible to arrive at a money measure of this error. Let $v$ be the average money cost of the subsidy received by the non-target population and $S$ the total money value of the subsidy. An indicator of this social cost is expressed in monetary terms as $E'$ $(=vNP^c/S)$. Cornia and Stewart (1995) report on the magnitude of these errors and argue that if the intent of the food subsidy is to improve food access for the poor, in the case of universal subsidies $F$ mistakes are generally low, especially if access to the subsidy is rationed and widely accessible. However, universal schemes involve considerable $E$ mistake. These errors can be reduced under certain circumstances. If incomes are, in general, low the incidence of the $E$ errors is likely to be small. Further, if 'poor people's grains' can be identified and the subsidy is on such grains, then an implicit subsidy to the poor exists and $E$ errors are likely to be reduced. Also the broader the definition of the target group, the lower the incidence of $E$ errors. It is important, therefore, to take into account both types of errors in evaluating a targeted program and, once one does that, the efficiency ranking of targeted and non-targeted programs may change.

Universal schemes save on verification and monitoring costs but err in the inclusion of the non-poor. A move from a universal to a targeted scheme could, however, lead to a major increase in $F$ errors while reducing the impact of $E$ errors. Cornia and Stewart (1995) also report that such moves have in the past not increased the real value of the subsidy going to the average recipient. Evidence from Sri Lanka actually indicates that the value of this subsidy has actually fallen over time. Cornia and Stewart (1995) adduce this to lower political support for a targeted as opposed to a universal subsidy program. Hence, an important reason for the failure of targeting is the lack of political clout of the poor. There is little reason to presume that the political clout of the poor goes up during a crisis. Hence, in some cases it might be worth designing a more defensible intervention that is universal but focused on food items consumed in disproportionately large amounts by the poor.
Thus there is some reason to believe that a good public expenditure design would incorporate elements of both universal as well as targeted programs. The optimal combination would depend on a number of factors include characteristics of the poor (can the poor be easily identified? How many poor are there and why are they poor?) as well as on country specific and context specific circumstances (van de Walle 1995). In addition, there needs to be a broad political consensus to protect the most important elements of this combination in case of a general reduction in public expenditure mandated by a structural adjustment program.

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[22] In the immediate aftermath of the balance of payments crisis in India in 1991–92, for instance, food and fertilizer subsidies were substantially cut. This led to an increase in rural poverty in India in the early 1990s, see Jha (2001).

**Broader issues in subsidy reform**

Clearly there are many issues in subsidy reform that go beyond their impact effect on the poor. In particular, there are general equilibrium effects with both efficiency and equity implications. A comprehensive study of such implications is beyond the scope of this paper and we only provide a few illustrative examples. In the case of the well-studied food subsidy in India, for instance, the base from which the food subsidy is calculated is inflated because of the high procurement prices paid to farmers (mostly from the richer states of Punjab, Haryana, and Andhra Pradesh). The free market prices of these foodgrains would be lower without the procurement price support. A subsidy is added to this price when the commodity is sold through 'Fair Price Shops'. Traditionally, this subsidy has been universally available but since about 2001 there has been an effort at targeting with differential prices paid by those below and above the poverty line. Verification and administrative costs have been high and targeting has been poor with no more than 3.7 per cent of the food subsidy actually going to those below the poverty line (Panagariya 2002). Although there is evidence to suggest that the food subsidy ameliorates nutritional deprivation, (Bhalotra 2004) it does not detract from the fact that the base from which this subsidy is calculated is inflated. [23]

The real problem with the fertilizer subsidy in India lies elsewhere — at the production stage (fertilizer plants) rather than consumption stage (farms). In the interest of establishing a domestic fertilizer industry (behind high tariff walls), the government provided support through a retention price mechanism. Fertilizer plants were provided a minimum guaranteed rate of return on their cost. This, of course, implied that the fertilizer plants had no incentive to minimize costs. A subsidy was added to lower the price paid by farmers, making them a captive market for these inefficient fertilizer plants. Hence, the fertilizer subsidy, as has been argued by some commentators, has actually been supporting an inefficient production structure rather than subsidizing farmers. A re-organization of the incentive structure facing the fertilizer industry would seem to be more important than an uncritical pruning of the fertilizer subsidy, per se. Perhaps a larger and more effective subsidy can be provided at lower overall budgetary cost if the fertilizer industry becomes more efficient.[24]

The issue of how production subsidies affect the poor (poor farmers) is less well studied. In a study of fertilizer use in India, Ghosh (2003) shows that fertilizer use, particularly the conjunctive variety that combines use of chemicals and manure, is more prevalent among farmers with larger land holdings and access to machines and irrigation than to small farmers. There is some evidence that from the point of view of environmental and soil fertility sustainability, that the conjunctive route is better. Further the conjunctive method is more amenable to the use of modern inputs. Nevertheless, small farmers are inclined towards fertilizer use. Thus, at least in the Indian case, the fertilizer subsidy does not appear to be unduly regressive.

However, the experience with subsidies varies greatly within the developing world. In Africa there is an urgent need to increase phosphorus use in an area covering about 530 million hectares. Further, phosphorus needs to be applied on these soils repeatedly for an extended period of time to replenish the fertility of the soil (Gladwin, Randall, Schmitz and Schuh 2003). Africa also needs a combination of inorganic fertilizer, biological fixation

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[23] There is evidence to suggest that the food subsidy is not efficiently distributed (Jha et al. 1999).

[24] For the Indian case other examples can be cited e.g., subsidies on tertiary and professional education, where a reallocation toward primary education would be more productive. Hence if subsidy switching and reform accompany a crisis, a smaller subsidy budget may yet be more socially productive. See Ministry of Finance, Government of India (1997).

technologies, biomass transfer of organic matter into the fields, and animal manure/compost. However, fertilizer use has been hampered by sharp rises in price following adjustment programs. In 1994–95 a withdrawal of the fertilizer subsidy led to a rise in the price of fertilizers by a massive 200 to 300 per cent in Malawi. Since the price of maize (the principal crop) did not rise significantly, the resulting cost crunch led to a sharp reduction in the cultivation of maize and a rise in undernutrition. A safety net for the displaced farmers was largely ineffective because of the paucity of funds and poor targeting and accompanying leakages.

Hence a pro-poor policy approach in cases such as these would combine macroeconomic stabilization (thereby obviating the need to cut subsidies drastically) with more market/regulatory related reforms. The latter include reduction in export taxes, which limit the access of many African farmers to the international market, a better distribution network for fertilizers; (preferably through the private sector) and rationalization of the subsidy structure to ensure that the fertilizer mix is right for soil conditions. Thus, it appears to be the case that although the experience with subsidies varies greatly within the group of developing countries, it always seems to be important to consider the general equilibrium effects of subsidy reform.

A distinction needs to be drawn between policies toward the alleviation of chronic as opposed to temporary (rises in) poverty following a program of structural adjustment. If there are hysteresis effects, such temporary rises in poverty could well become chronic. The policy response to the problem of short-run increases in poverty has often been in the form of social funds (SF). These were first introduced in the 1980s by the World Bank to address the social and economic crises that were then afflicting Latin American countries. Since then these have spread to Africa but have a very limited presence in Asia. Essentially, SF are social safety nets designed to mitigate the impact on the poor of structural adjustment, premature financial liberalization and unguided globalization (Cornia and Reddy 2004). They are used for short-term purposes and address broad themes of employment, infrastructure and community development, social services and decentralization. SF are to be interpreted as one of the proffered solutions to relief from poverty and, as such, do not constitute a general solution for poverty. SF are largely autonomous from governmental control and are either directly administered by a development agency or from the office of the President or Prime Minister of the beneficiary country. On the face of it SF appear to have many advantages. They involve lower transactions costs, greater accountability, flexibility and transparency than regular pubic sector anti-poverty programs, and are demand-driven since they directly provide services to target populations (the most deprived). Further, in principle, the provision of SF should also aid in the decentralization process. However, SF have not worked well in practice. The evidence suggests that SF do not reach the poor (Bigio 1998). Cornia and Reddy (2004) have shown that allocations under SF are inadequate as well as unpredictable and are not well targeted.[25] Further since SF are aimed at providing short-term relief they fail to build institutional capacity for sustained poverty reduction, particularly if these are not well harmonized with existing longer-term anti-poverty initiatives. The impact of SF on temporary increases in unemployment and poverty following a program of structural adjustment has been minimal partly because, given the paucity of public funds, allotments to

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[25] Using data from the mid 1980s to mid 1990s, Cornia and Reddy show that that social funds are only a small percentage of GDP (ranging from 0.1 to 0.4 per cent in Africa) and 0.4 to 1.0 in Latin America. As a share of total social expenditures it has ranged from 0.3 per cent in Chile to 11 per cent in the case of Bolivia's Emergency Social Funds. The maximum amounts (average of $18 per poor person) made available to the poor from the social funds have been small. In addition there are considerable problems of co-ordination between social fund and the onset of a downturn accompanying a structural adjustment program.

SF often come at the expense of longer-standing anti-poverty programs and other social security arrangements.[26]

A final factor to be considered is the pursuance of policies that will protect the assets of the poor during a crisis. During the 1997–98 recent Indonesian financial sector crisis, for example, almost all banks became insolvent. The reasons for this are complex and have been discussed in some detail in Kenward (2002) and Enoch et al. (2003). A series of measures ending financial repression[27] culminated in a sharp shrinking of the monetary base in relation to total money supply with most of the loans being of a speculative nature. The ensuing collapse of the banking sector led to liquidations of funds held in a large number of bank accounts, including those held by the poor. In this light Grenville (2004) argues that Indonesia should designate certain financial institutions to be safe in that their risk exposure is minimal. This should be arranged *before* the onset of any crisis. To the extent that they have bank accounts, the poor and other less advantaged sections (e.g. pensioners) would be encouraged to maintain bank accounts with such safe institutions. These institutions would provide security of deposit but rates of return would be low in comparison to those in banks with greater risk exposure. This is a useful suggestion and needs to be adopted more generally in the developing world as part of a strategy to preserve the value of the assets of the poor. This needs to be supplemented by strategies to preserve the non-monetary assets of the poor, e.g., by providing low-cost crop insurance schemes to poor farmers whose agricultural operations may be threatened, for instance, by natural calamities.


## V. Towards a Pro-poor deficit finance policy for developing countries

During a downturn are there automatic stabilizers at work that can mitigate the effects of the downturn? The fiscal balance typically fluctuates over the business cycle due to the so-called automatic stabilizers, i.e, those elements of fiscal policy that tend to mitigate output fluctuations without any explicit government action. As the economy slides into a recession incomes fall, hence collected taxes fall, imports fall, hence import duties fall. There is greater unemployment and the payment of the unemployment benefit rises. Hence the fiscal deficit starts to rise; during a boom the reverse process takes place.

Apart from automatic stabilizers, discretionary fiscal policy and structural changes (e.g. demographic changes) in the economy affect the fiscal balance. These are typically long-term changes that do not concern us when discussing stabilization policy. The sensitivity of the fiscal balance to the economic cycle depends on a) the size of the government sector. The larger the revenue/GDP and expenditure/GDP ratios, the more sensitive the fiscal balance will be to fluctuations in GDP; b) the progressivity of taxes and the generosity of unemployment benefits. The more progressive the rate structure of the tax, the more sensitive will it be to fluctuations in income. c) the tax structure. The larger the share of progressive or cycle-sensitive taxes in total revenue, the more sensitive total tax revenue will be.

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[26] The paucity of funds characterizes other anti-poverty initiatives such as micro-finance as well. Micro-finance institutions (mFIs) have played a significant role in poverty alleviation, in many countries but their financial health is not such as to reduce significantly the regulatory restrictions on them. For instance, in April 2004, the Reserve Bank of India turned down a proposal to allow large MFIs (those with net owned funds of at least Rs. 20 million) institutions to accept public deposits. However, smaller MFIs enjoy a more relaxed regulatory structure and a number of tax breaks.

[27] Diaz-Alejandro (1985) called this the 'goodbye financial repression, hello financial crash' phenomenon.

In developed countries the role of automatic stabilizers is very important. When the automatic stabilizers are effective, there will be less need for discretionary fiscal policy over the business cycle. This implies that tax rates and expenditure programs are stable over time and this stability may reduce uncertainty and have positive effects on long-term growth. Taylor (2000) concludes that in the USA over the last four decades automatic stabilizers have been far more important than discretionary fiscal policy. He prefers discretionary monetary policy since this weighs both inflation and the output gap. Further, monetary policy has the advantage that it creates less uncertainty and is subject to shorter lags than fiscal policy. However, automatic stabilizers are far less important in developing countries because i) the revenue/GDP and expenditure/GDP ratios are far smaller than in advanced countries.[28] (ii)Within that smaller tax base, the share of income-elastic taxes is smaller. Income taxes account for almost 12 per cent of GDP in OECD countries but only for 5 per cent in non-OECD countries and Asian countries. The corresponding figure for a large country such as India is only 2 per cent. (iii) On the expenditure side there are few automatic stabilizers in developing countries. In the OECD countries, unemployment benefits are an important expenditure category that moves with the cycle. Few developing countries have significant social security spending. With less powerful automatic stabilizers in developing countries, there would be a greater need for discretionary fiscal policy intervention.

An excess of public expenditure can be financed in four distinct[29] ways[30]: printing money, running down foreign exchange reserves, borrowing abroad and borrowing domestically. Most countries use a combination of these measures to finance the deficit. Each of these measures leads to at least one potentially serious problem: printing money is a tax (seignorage). If printing money leads to higher inflation an inflation tax is said to be in place.[31] A steep rise in prices, particularly of essentials consumed by the poor, can be highly regressive and increase poverty.[32] Drawing upon foreign exchange reserves excessively can lead to a balance of payments crisis. In these days of contagion it can also lead to a full-blown currency crisis. The near substitute policy of borrowing abroad excessively — either by the public sector (Brazil) or the private sector (Thailand) — can lead to severe currency crises. In such cases financing the deficit can be worse than the deficit itself. Internal borrowings can lead to pressures on interest rates with, in some cases, the government borrowing not to augment resources but to pay the interest on the debt. Typically a combination of these factors means that many developing countries have to rely, to a considerable extent, on non-bond (monetary) financing of the deficit. When this occurs, the

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[28] Zee (1996) estimates that tax/GDP ratio was around 30 per cent in OECD countries against 17 per cent in non-OECD countries and only 15 per cent in Asia.

[29] Another method that has sometimes been used is the financing of the deficit through private savings. However, this is at best a mixed blessing because not only do national savings fall as a consequence, but also some saving outlets are net substitutes for foreign deposits so that some of the increased demand for such savings instruments spills over into foreign deposits. See Feldstein and Iwata (2002).

[30] Apart from increasing taxes and/or decreasing expenditure.

[31] The literature has failed to find at least a contemporaneous link between fiscal deficits and inflation. This is because of the complex ways in which fiscal deficits affect macroeconomic variables. Catao and Terrones (2001) study a panel of 23 emerging markets for 1970–2000 and specifically use a rich dynamic specification which allows the short-run relation between deficits and inflation to vary across countries. They find that fiscal deficits bear a strong positive relationship between deficits and inflation in the short as well as the long run. In the long run, the relation between deficits and inflation appears to be homogeneous across countries. Further only world inflation and oil price changes proved to be significant *independent* determinants of inflation.

[32] Thus in India higher food and fertilizer prices in response to the fiscal adjustment following the 1990–91 crisis led to a sharp increase in poverty in 1991–92. See Jha (2001).

distinction between fiscal policy and the monetary base of the central bank is blurred and the independence of monetary from fiscal policy is compromised.

Thus cutting spending or increasing revenue through additional and/or more streamlined taxation remain the most important methods to reduce the deficit. The conceptually correct way to choose between the two is to compare the marginal cost of raising a dollar of revenue with the marginal benefit of expenditure. From the viewpoint of designing a pro-poor stabilization policy these gains and losses should be distributionally weighted with gains/losses to consumers at the lower end of the income distribution being given greater weight than those for consumers at the upper end of the income distribution. The specification of these weights depends upon the welfare function used for evaluation. For instance, we could multiply gains/losses to different income classes by the reciprocals of their incomes. Whereas income/consumption for different income groups typically exist in practice, there might be problems in obtaining reliable estimates for either the cost of mobilizing extra tax revenue or the benefit of marginal public spending, especially if these have to be weighted to reflect distributional concerns.

Which route — increasing taxation or lowering public expenditure — is to be given greater weightage in a program of adjustment could depend upon initial conditions and thus vary across countries. With a low tax/GDP ratio India should certainly raise more tax revenue but with a low expenditure/GDP ratio it probably needs to switch rather than reduce public expenditure. Chile, on the other hand already has a high tax/GDP ratio as well as a high expenditure/GDP ratio and adjustments should concentrate on the expenditure side. This recommendation is at variance with World Bank (1992), which makes the case for generalized expenditure cuts unless, for political or other reasons, public expenditures are inflexible in the downward direction.[33]

All arguments to cut public expenditure or raise taxes to reduce the budget deficit must recognize that both are endogenous to GDP. Thus if GDP declines during a recession, tax revenue would go down. The response of tax revenues to base changes is often measured through measures such as tax buoyancy and tax elasticity. Elasticity of a tax system is defined as $\varepsilon$, where

$$\varepsilon = \frac{\text{Percentage change in tax revenue (with unchanged tax system)}}{\text{Percentage change in tax base (GDP)}}$$

Whereas tax buoyancy is defined as

$$\theta = \frac{\text{Percentage change in tax revenue}}{\text{Percentage change in tax base}}$$

Tax buoyancy and tax elasticity look very similar to each other but there is one crucial difference — tax elasticity is computed without any change in the tax structure. Both are computed in real terms. Tax elasticities are difficult to compute because they require one to calculate a counterfactual.[34]

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[33] In such cases, the World Bank argues, tax raises or hikes in the prices of public provided goods and services may be necessary. If there is limited room for manoeuvre the end result may be inflationary finance — which is quite regressive.

[34] Haughton (1998) discusses the methodology for computing tax buoyancy and elasticity.

The values of tax buoyancy and elasticity are critical for understanding the fiscal impact of an adjustment-induced downturn. Muganyizi (2002), for example, computes the buoyancy and elasticity of Tanzanian tax revenues to be quite high (Table 5).

**Table 5**
**Tax Revenue Buoyancy and Elasticity in Tanzania (Overall Tax System)**

|  | 1996–97 | 1997–98 | 1998–99 | 1999–00 |
|---|---|---|---|---|
| Buoyancy (ε) | 0.8 | 0.5 | 0.5 | 1.1 |
| Elasticity (θ) | 0.92 | 0.6 | 0.72 | 0.7 |

*Source*: Muganyizi (2002)

In a similar vein[35] Teera (2002) provides estimates for tax buoyancy for a number of developing countries over the period 1975 to 98. These estimates, even for low-income countries are quite high and are reported in Table 6. The unweighted average of tax buoyancy for the 40 countries reported in Table 6 is 1.045. Hence, deflationary adjustment policies may, *ceteris paribus*, be expected to lower tax revenues and exacerbate fiscal deficits in deficit countries.

**Table 6: Tax Buoyancy in Select Low-Income Countries over 1975 to 98**

| Country | ε | Country | ε | Country | ε |
|---|---|---|---|---|---|
| Bangladesh | 2.26 | Guinea-Bissau | 0.43 | Nigeria | 0.15 |
| Bhutan | 1.61 | Haiti | 0.94 | Pakistan | 1.16 |
| Burkina Faso | 1.08 | India | 0.95 | Rwanda | 1.20 |
| Burundi | 1.46 | Indonesia | 0.99 | Senegal | 1.25 |
| Cameroon | 0.69 | Kenya | 1.45 | Sierra Leone | 0.73 |
| Chad | 0.48 | Lesotho | 1.95 | Solomon Islands | 1.38 |
| Comoros | 0.33 | Liberia | 1.22 | Togo | 0.91 |
| Congo, Dem. Rep. | 0.52 | Madagascar | 0.56 | Uganda | 0.72 |
| Congo, Rep. | 0.23 | Malawi | 1.48 | Vietnam | 0.67 |
| Cote d' Ivorie | 0.98 | Mali | 1.47 | Yemen, rep. | 1.45 |
| Ethiopia | 0.18 | Mauritania | 1.07 | Zambia | 0.59 |
| Gambia | 1.55 | Myanmar | 0.55 | Zimbabwe | 1.612 |
| Ghana | 0.96 | Nepal | 1.76 | Unweighted Average | 1.045 |
| Guinea | 0.82 | Nicaragua | 1.99 |  |  |

*Source*: Teera (2002)

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[35] The Tanzanian figures are quoted since data on both buoyancy and elasticity are available for Tanzania. In 1999–00 the buoyancy was higher than the elasticity indicating substantial increase in tax revenue in response to higher economic growth.

Although parallel concepts could be defined for public expenditure, the pertinent point is that during an adjustment-induced downturn public expenditures would be reduced only marginally in most cases whereas with positive (possibly high) tax buoyancy and elasticity, tax revenues could fall substantially. Hence, the net impact effect of this adjustment policy could be to raise the fiscal deficit. The revival in public finances would then depend largely on the rise in tax revenue consequent upon any subsequent economic growth. This partly explains the less than stellar performance of IMF type adjustment programs in reducing the fiscal deficit over a reasonable time horizon and the persistence of fiscal stress in many developing countries.

The stance of discretionary fiscal policy depends upon the level of the fiscal deficit that is to be attained. Some IMF economists have argued that a general rule of thumb for determining the optimal fiscal deficit should be that that the gross fiscal deficit should be sustainable in the medium term (say 10 to 15 years). However, a difficulty with such injunctions is that tests for sustainability usually treat the rate of economic growth and, sometimes, the rate of interest to be paid on the debt as exogenous. A current macroeconomic adjustment by reducing the short-run rate of economic growth may lower the expost tax revenue and chances of fiscal adjustment. It is also important to underscore the point that deficit reduction should not become an end in itself — even if we discount the effects of such adjustment on the poor. For example if the intention is to minimize the impact of the fiscal deficit on growth, deficit reduction only up to a limit (around 1.5 per cent of GDP) is useful. Any further deficit reduction can actually hurt the growth process (Adam and Bevan 2001).

What determines the optimal size of the budget deficit, particularly from the vantage point of the poor that a developing country should run? This depends upon several factors. The levels of internal and external debt are important, as are the level and future path of the current account deficit since they will determine how the fiscal deficit spills over onto the external account. If the level of monetization of the deficit is high then further deficits will add inexorably to inflation. The overall policy regime is also a key determinant. For instance, under an open capital account, the appropriate level of sustainable fiscal deficit and of sustainable government debt should be reduced significantly. A lower level of the long-run fiscal deficit will help to a) avoid frequent and large fiscal adjustments as capital flows turn around; b) reduce risk of capital outflows. A large fiscal deficit and a high level of government debt will make the country more vulnerable to shifts in market sentiment; c) reduce the risk premium that accompanies high levels of debt; and d) account for contingent liabilities. Next to the explicit government debt, the government may carry hidden liabilities, e.g., guaranteed borrowing by state-owned enterprises.[36] Another important factor is the strength of the domestic financial system (Kopits and Symanksy 1998). Capital inflows are generally associated with sharp increases in domestic credit. Sudden outflow of funds can affect the health of the financial institutions and government support will be necessary, as was for instance during the Asian financial crisis. Developing countries should, in principle, be wary of lifting capital controls too soon and certainly not before banking and financial sector reforms have been put firmly in place. Developing countries that have partially or totally lifted capital controls should consider reimposing capital controls.

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[36] Kopits and Symansky (1998) and Heller (1997) argue that under such conditions fixed rules such as a balanced budget rule or a debt ceiling should be in place. However, whether such a strategy will work will depend upon whether contingent liabilities are reined through financial sector reform and supervision. Even then it is not clear whether such rules will stand in the face of very large turnarounds of capital. These authors do not quantify their impact on the poor.

During the period of reduction of the fiscal deficit[37] the path followed by adjustment can be made pro-poor. Lustig (2002) analyses the contours of an optimal policy response once adjustment becomes essential. She conceives of this adjustment as having three essential components: (i) avoiding excessive adjustment (overkill), (ii) avoiding postponing adjustment (underkill), and (iii) protection, to the extent, of programs benefiting the poor. Excessive adjustment can lead to or prolong a sharp recession. If there are hysteresis effects in this recession the downturn may last for an unnecessarily long period and cause substantial loss of output. However, too little adjustment or postponing adjustment is also not an option — particularly in these days of contagion effects. If markets perceive that there is inadequate response to financial sector weakness, or fiscal or current account deficits there will be strong repercussions and what was a situation merely requiring adjustment may degenerate into a crisis. This crisis would hurt poor people more than the foregone adjustment would have. However, within these two limits there may be room for a pro-poor response to the crisis, although this is complicated by the fact that different types of poor — e.g. the rural poor vs. the urban poor — may be affected differently by crisis. Lustig (2002) advocates, at the margin, the general approach of development of safety nets for the poor (as opposed to sector specific approaches) especially since some of the spending targeted to the poor is distinctly procyclical. Lustig advocates the involvement of nongovernmental organizations (NGOs) and international donors in deciding upon the design of safety nets and supplementing funds for these safety nets. In an expenditure reduction program items for downsizing should be prioritized with those of the greatest relevance to the poor being cut the last and the least. Lustig argues that the cost of safety nest need not be large. The Mexican program *Progresa* targets a whole range of development indicators including poverty, health and nutrition and benefits about 2 million households although it costs only 0.2 per cent of Mexican GDP and 1 per cent of the total federal budget. 'Had *Progresa* existed when the 1995 crisis hit Mexico, the rural poverty gap and the square poverty gap … would have declined by 17 per cent and 25 per cent respectively, in the year after the crisis' (Lustig, pp. 17). In a similar vein Arcia (2002) argues that maintaining Nicaragua's social safety net program — even in the case with least rationalization of existing taxes and expenditure programs would have raised the fiscal deficit by about 2 per cent only.

This leads to the broader point that contingency plans for addressing a crisis must be put in place before any crisis takes place and not improvised in an *ad hoc* manner once the crisis has already set in. Two prerequisites for this are the development of a data base on consumption patterns of the poor and structure of programs that are of greatest benefits to the poor (these would include targeted human development programs and workfare or public works programs), and contingency plans for funding of the most effective of these programs or subsidies either through budgetary switching or contributions from international donor agencies.

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[37] The standard prescription is that if the economy is not highly inflationary, and if public expenditures are well targeted, the option of inflationary financing may be worth pursuing. Expenditure cuts should follow this, to be followed by tax increases, if necessary. Countries that are on flexible exchange rates and/or have open capital accounts will have less flexibility than counties with credible pegs and capital controls.

## VI. An International Institutional Framework Supportive of Pro-poor Adjustment

What international arrangements can be made to support pro-poor adjustment in developing countries? This is an important area in its own right and doing full justice to it within the confines of this paper is not possible. Hence I confine myself to a brief overview.

First, since many developing countries experiencing crises rely on adjustment loans from the IMF and the World Bank it is important that such adjustment programs be made pro poor within their overall objective of attaining macroeconomic stability. A substantial body of literature now argues that the Structural Adjustment Program (SAP) of the IMF and the attendant conditionalities do not constitute even an optimal macroeconomic response to crises.[38] Insulating the poor from the harshest effects of the SAP is hardly given much attention. Killick (1999), for example, argues that SAP needs to be specifically made sensitive to the needs of the poor in developing countries.

The insensitivity of SAP to issues of concern to the poor extends beyond the duration of the macroeconomic crisis. In particular, if SAP lowers the stake that the poor have in raising the rate of economic growth it might reduce the poor's support for pro-liberal, growth-enhancing reforms. In this vein Easterly (2001) argues that IMF and WB adjustment lending (AL) has lowered the response of poverty to economic growth. A possible explanation for this is that during an expansion there is more macro adjustment than in a contraction. This hypothesis can be tested explicitly by evaluating the behavior of fiscal policy and macro policy variables during expansions and contractions with or without AL. A competing explanation is that the IMF-WB conditionality may itself cause an expansion or contraction in aggregate output — depending on the composition of the structural adjustment package — but not affect the poor very much. This is because the poor work mainly in the informal sector, which is not much affected by AL. On the whole, there is no systematic effect of AL on economic growth. Expansions lower poverty and contractions raise it. Higher inequality lowers the beneficial effect of higher growth on poverty. The poor benefit less from expansions during a structural adjustment program than in expansions without an adjustment program while they are hurt less by contractions. Expansion under AL is less pro-poor while contraction is less anti-poor. Conditionality on macro adjustment is tougher during expansion than contraction since the IMF-WB may fear deepening a contraction with excessive restraint. The principal means of fiscal adjustment in expansions may be through regressive taxation like sales taxes, which lower the benefits to the poor of mean income growth. Social safety nets may be active during contractions but may become lax during expansions. This is under high AL. Under low AL there is no such countercyclical movement in transfers. Lowering the sensitivity of poverty to aggregate growth rate could be dangerous because it gives the poor less of a stake in good economic performance. The poor may be ill-placed to take advantage of new opportunities created by structural adjustment reforms just as they may suffer less from the loss of old opportunities in sectors that were artificially protected prior to reforms.

When countries do run budgetary deficits different methods of financing the deficit have their costs and advantages. It does seem to be the case that highly concessional external loans — when available — are the most attractive ways to finance budgetary deficits.[39] As discussed

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[38] For a review of this literature see Hutchinson (2002) and Jha (2003).

[39] Some authors, particularly Burnside and Dollar (2000), have expressed doubts about the effectiveness of aid. If aid is ineffective, it does not matter if it is not forthcoming in large magnitudes. In their model, aid contributes positively to economic growth, but only in 'good' policy environments. However, Hansen and

above, domestic financing runs the risk of jeopardizing the operations of the central bank, creating inflationary pressures or crowding out private investment through higher interest rates (if government debt is sold in the open market). External borrowing at market terms may probably be risky and may, in the case of many developing countries, may simply not be available. Using data from West and Central African countries Beaugrand et al. (2002) show that this proposition holds true even under conditions of the possibility of devaluation of the home currency (indicating higher domestic resource cost of servicing this debt). Hence it would be useful to have an international funding arrangement to provide low interest loans to select developing countries facing difficulties in financing their budgetary deficits by borrowing in international or domestic capital markets. This facility would be available only to select HIPC facing financial destabilization at the margin as they attempt to finance current budgetary deficits. The gains from such concessional financing are likely to be high even for donor agencies since this would obviate the need to bail out these countries once again from excessive external debt or worse. Hence there needs to be a financing facility for providing such support to select developing countries facing excessively high marginal costs of financing budgetary deficits while being on track for a sustainable macroeconomic recovery.

It is also possible to build in elements of a pro-poor strategy in a program of debt relief or debt restructuring. This is true in the case of the HIPC countries or even under structural adjustment programs where existing debt payments are rescheduled or debt reduced (Morrissey 2002). Whereas most debt restructuring programs emphasize the pro-growth aspects of debt relief, Morrissey argues that it is possible to build in a pro-poor dimension. This, he argues, would make the ensuing growth sustainable since the poor will develop a stake in such reforms. Debt relief could be tied to the undertaking of specific pro-poor expenditures under a previously approved Poverty Reduction Strategy Paper (PRSP). These expenditures should be capable of monitoring under the agreed program. Incentive to persist with such pro-poor expenditures could be strengthened by accelerating debt relief to match progress in reducing the incidence of poverty.

It is also important to raise the quantum of aid flowing to developing countries and to ensure that such aid is principally multilateral and not tied to donor conditions. A number of initiatives in this direction have been discussed in a recent WIDER project — for a summary see Odedokun (2004). Just as public expenditure needs to be disaggregated to understand which components are of more benefit to the poor so does foreign aid. This question has as yet not been formally addressed in the literature although there is some modeling of international aid on the fiscal response of the state. Mavrotas (2003) analyzes the impact on the fiscal response of the Ugandan state to various forms of international aid. Project aid and food inflows appear to lower public investment as well as government consumption expenditure with the decline in the former being larger. Program aid and technical assistance have opposite effects. There is little reason to suppose that taxation effort will be lowered by international aid. Government borrowing is lowered considerably by additional international aid coming in the form of program aid, technical assistance and food aid. Project aid funds

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Tarp (2000, 2001) argue that aid accelerates growth whenever growth is driven by capital accumulation and that aid effectiveness is highly sensitive to the choice of estimator. In the Hansen and Tarp regressions, aid increases growth (primarily through investment) and this effect is not conditional upon policy, particularly the policy index established by Burnside and Dollar. Hence there is some evidence to suggest that aid remains an effective instrument for enhancing economic growth in the poorest countries. Economides et al. (2004) argue that the direct effect of aid is always beneficial as it helps to enhance infrastructure. However, aid also has an indirect effect since it leads to rent seeking. Particularly in countries with large public sectors this indirect effect significantly reduces the direct positive effect of aid.

reduce borrowing only slightly and, therefore, have only minimal impact on the government's budget constraint. Thus project aid is the least useful form of international aid.

Finally, the international financial architecture needs to be improved to reduce the risk of speculative attacks on the currencies of poor countries. Clearly developing countries — even large groups of them — are unable to protect themselves from international capital volatility. A global fund could be established to aid developing countries facing such volatile capital flows but otherwise making good progress with macroeconomic stabilization policies. This could be funded through a number of global taxes and charges, which promise good yields (Jha 2004b) and some of which, like a Currency Transactions, tax introduce some frictions in the international flow of capital. These funds could be used to make conditional transfers (including the creation of stabilization funds) to developing countries facing sudden capital outflows.

## VII.  Conclusions

Macroeconomic adjustment in developing countries has strong distributional consequences, particularly for the poor.  Further such adjustment while effecting a revival in macroeconomic parameters may have hysteresis effects on the poor such that the attendant rise in poverty may become chronic. Apart from these undesirable welfare effects there is the additional risk that if this rise in poverty is long enough or the benefits of any ensuing revival do not sufficiently favour the poor, a reforms program for economic revival may lose the support of the poor and, hence, may become unviable.

Thus both from an efficiency point of view (maintaining political support for an economic reform program promising rapid economic growth) and an equity viewpoint (shielding the poor from the worst effects of a downturn) it is important to append a pro-poor fiscal policy to an economic stabilization program.

This paper has outlined the basic contours of such a strategy. It has argued that although the fiscal deficit in many developing countries appears to be unsustainable, a policy package involving tax and expenditure reforms when the economy is not in crisis can help reduce the risk from high fiscal deficits. Furthermore, such tax and expenditure reforms can also be fine tuned to help the poor. The paper also discusses policy measures to shield the poor in anticipation of a downturn as also the contours of a pro-poor fiscal adjustment once it becomes necessary to have macroeconomic adjustment. Given the wide heterogeneity among developing countries the paper's policy prescriptions are context and country specific. Finally the paper considers some policy measures that can be taken at the international level to provide support to developing countries in their efforts to make pro-poor adjustment feasible.

# References

Aaron, H. and M. McGuire (1970). 'Public Goods and Income Distribution', *Econometrica*, 38: 907–20.

Adam, C. and D. Bevan (2001). 'Non-linear effects of Fiscal Deficits on Growth in Developing Countries' Working Paper, Department of Economics, Oxford University.

African Economic Research Consortium (1998). *Tax Reform and Revenue Productivity in Ghana*, Nairobi, Kenya: The Regal Press.

Aguilar, R. (2000). 'Angola's Incomplete Transition' in T. Addison (ed.) *From Conflict to Reconstruction in Africa'*. Helsinki, UNU/WIDER.

Ahmad, Ehtisham and Nicholas Stern (1984). 'The Theory of Reform and Indian Indirect Taxes.' *Journal of Public Economics* 25(3): 259–98.

Ahmad, Ehtisham and Nicholas Stern (1987). 'Alternative Sources of Government Revenue: Illustrations from India, 1979–80', in D. Newbery and N. Stern (eds), *The Theory of Taxation for Developing Countries*, Oxford: Oxford University Press.

Ahmad, Ehtisham and Nicholas Stern (1990). 'Tax Reform and Shadow Prices for Pakistan', *Oxford Economic Papers,* 42(1): 135–59.

Ahmad, Ehtisham and Nicholas Stern (1991). *The Theory and Practice of Tax Reform in Developing Countries*, Cambridge: Cambridge University Press.

Alderman, Harold and Carlo del Ninno (1999). 'Poverty Issues for Zero Rating VAT in South Africa', *Journal of African Economies*, 8(2): 182–208.

Arcia, G. (2002). 'Briefing Note for Consulting Assistance on Economic Reform II, Discussion Paper No. 82: 'Macroeconomic Impact of Social Safety Nets', http://www.cid.harvard.edu/caer2/htm/content/papers/bns/dp82bn.htm, accessed 13 May 2004.

Atkinson, A. and F. Bourguignon (1991). 'Tax Benefit Models for Developing Countries: Lessons from developing countries', in J. Khalilzadeh-Shirazi and A.Shah (eds), *Tax Policy in Developing Countries*, Washington, D.C., The World Bank, pp. 261–26.

Banks, James, Richard Blundell, and Arthur Lewbel (1996). 'Tax Reform and Welfare Measurement: Do we need demand system estimates?' *The Economic Journal*, 106: 1227–41.

Beaugrand, P., Loko, B. and M. Mlachila (2002). 'The Choice between external and domestic debt in financing budget deficits: the case of Central and West African Countries' Working Paper, IMF, 2002/79.

Bhalotra, S. (2004). 'Welfare Implications of Fiscal Reform: The Case of Food Subsidies in India' in T. Addison and A. Roe (ed.) *Fiscal Policy for Development: Poverty, Reconstruction and Growth*, Basingstoke, UK and New York: Palgrave-Macmillan

Bigio, A. (ed.) (1998). *Social Funds and Reaching the Poor: Experi3ences and Future Directions*, World Bank: Washington, DC.

Blejer, M. and A. Cheasty (1991). 'The Measurement of Fiscal Deficits: Analytical and methodological issues', *Journal of Economic Literature*, 29(4)

Blundell, R, Duncan, A., McCrae, J. and C. Meghir (2000). 'Evaluating In-Work Benefit Reforms: The working families' tax credit in the UK', Discussion Paper, Institute for Fiscal Studies, London.

Blundell, R. and T. MacCurdy (2000). 'Labor Supply: A review of alternative approaches', in O. Ashenfleter and D. Card (eds), *Handbook of Labor Economics*, Elsevier, Amsterdam.

Bourguignon, F., F. Fereira, and P. Leite (2002a). 'Ex-ante Evaluation of Conditional Cash Transfer Programs: The case of Bolsa Escola, mimeo.

Bourguignon, Francis, Luiz A. Pereira da Silva and Nicholas Stern (2002b). 'Evaluating the Poverty Impact of Economic Policies: Some analytical challenges', mimeo, World Bank.

Brennan, G. (1976). 'The Distributional Implications of Public Goods', *Econometrica*, 44: 391–9.

Buffie, E. (1999). 'Public Sector Wage-Cycles and the Co-movement of the Fiscal Defict and Inflation in Less-developed Countries' *Journal of Money, Credit and Banking*, 31(4): 785–810.

Buiter, W. (1985). 'A Guide to Public Sector Debts and Deficits' *Economic Policy*, 1(1): 13–79.

Buiter, W. (1993). 'Measurement of the Public Sector Deficit and Its Implications for Policy Evaluation and Design', in M. Blejer and A. Cheasty (eds), *How to Measure the Fiscal Deficit*, IMF, Washington, DC, USA, pp. 297–344.

Burnside, C., and D. Dollar (2000). 'Aid, Policies and Growth'. *American Economic Review*, 90(4): 847–68.

Calvo, G., and C. Reinhart (2000). 'Fear of Floating', available at: www.puaf.umd.edu/papers/reinhart/papers.htm

Calvo, G. and C. Vegh (1991). '*Exchange-Rate-Based Stabilization Under Imperfect Credibility'* International Monetary Fund, IMF Working Papers: 91/77

Catão and Marco Terrones (2001). 'Fiscal Deficits and Inflation: A new look at the emerging market evidence', IMF Working Paper WP/01/74, International Monetary Fund.

Chen, Duanije, John Matovu and Ritva Reinikka (2001). 'A Quest for Revenue and Tax Incidence', in Ritva Reinikka and Paul Collier (eds), *Uganda's Recovery: The Role of Farms, Firms and Government*, Washington, DC: World Bank.

Chu, Ke-young, Hamid Davoodi and Sanjeev Gupta (2004). 'Income Distribution and Tax and Government Social Spending Policies in Developing Countries', in A. Cornia (ed.) *Inequality, Growth, and Poverty in an Era of Liberalization and Globalization*, New York: Oxford University Press.

Cornes, R. (1995). 'Measuring the Distributional Impact of Public Goods', in D. van de Walle and K. Nead (eds), *Public Spending and the Poor: Theory and Evidence,* Baltimore, MD: Johns Hopkins University Press.

Cornia, G. and F. Stewart (1995). 'Two Errors of Targeting', in D. Van de Walle and K. Nead (eds), *Public Spending and the Poor: Theory and Evidence*, Baltimore, Maryland: John Hopkins University Press for the World Bank

Cornia, A. and S. Reddy (2004). 'The Impact of Adjustment Related Social Funds on Income Distribution and Poverty' in A. Cornia (ed.) *Inequality, Growth, and Poverty in an Era of Liberalization and Globalization*, New York: Oxford University Press.

Creedy, J. and A. Duncan (2002). 'Behavioral Micro-Simulation with Labor Supply Responses' *Journal of Economic Surveys*, 16(1): 1–39.

Davidson, Russell, and Jean-Yves Duclos (1997). 'Statistical Inference for the Measurement of the Incidence of Taxes and Transfers', *Econometrica*, 65: 1453–65.

Demery, L. (2000). 'Benefit Incidence: a Practitioner's Guide', Poverty and Social Development Group, The World Bank, mimeo.

Demery, L. (2002). 'Benefit Incidence Analysis', in *Poverty Analysis Tool Kit*, The World Bank.

Diaz-Alejandro, C. (1985). 'Goodbye financial repression, Hello Financial Crash', NBER Working Paper, No. 6300.

Dornbusch, R. (1976). 'Expectations and Exchange Rate Dynamics', *Journal of Political Economy*, 84(6): 1161–76.

Easterly, W. (1999). 'When is Fiscal Adjustment an Illusion?', *Economic Policy*, 28(1): 57–86.

Easterly, W. (2001). 'The Effect of IMF and World Bank Program on Poverty', WIDER DP 2001/102.

Economides, G., Kalyvitis, S. and A. Philippopoulos (2004). 'Do Foreign Aid Transfers Distort Incentives and Hurt Growth? Theory and Evidence from 75 Aid-Recipient Countries' CESifo Working Paper No. 1156.

Economist Intelligence Unit (2000). *Country Report: Zimbabwe*, London.

Eichengreen, B. and M. Mussa with Giovanni,D., Enrica, D., Gianmaria, M., and A. Tweedie (1998). 'Capital Account Liberalization: Theoretical and Practical Aspects, Occasional Paper No. 1972, Washington, D.C.: IMF (August).

Eichengreen, B. and D. Leblang (2002). 'Capital Account Liberalization and Growth: Was Mr. Mahatir Right?' NBER Working Paper, No. 9427.

Eisner, R. (1984). 'Which Budget Deficit? Some Issues of Measurement and their Implications', *American Economic Review (Papers and Proceedings),* 74 (2) 138-143.

Enoch, C. , Frecaut, O. and A. Kovanen (2003) "Indonesia's Banking Crisis: What Happened and What did we Learn" *Bulletin of Indonesian Economic Studies*, 39(1), 75-92.

Epstein, G. (2002). 'Employment Oriented Central Bank Policy in an Integrated World Economy: A Reform Proposal for South Africa', Working Paper Number 39, Political Economy Research Institute, University of Massachusetts at Amherst.

Feldstein, Andrew and Shigeru Iwata (2002). 'Why is it So Hard to Finance Budget Deficits? Problems of a developing country', IMF Working Paper WP/02/95, International Monetary Fund.

Fields, G. (1991). 'Growth and Income Distribution', in *Essays on Poverty, equity and Growth,* G. Psacharopoulos (ed.) Oxford: Pergamon Press.

Fischer, S. and W. Easterly (1990). 'The Economics of the Government Budget Constraint', *World Bank Research Observer* 5(2) (July).

Foster, James E. and Anthony F. Shorrocks (1988). 'Poverty Orderings', *Econometrica* 56: 173–77.

Furman, J. and J. Stiglitz (1998). 'Economic Crises: Evidence and insights from East Asia', *Brookings Papers on Economic Activity*, 2.

Gemmell, N. (2000). 'Fiscal Policy in a Growth Framework' paper for the WIDER project on New Fiscal Policies for Growth and Poverty Reduction.

Ghosh, N. (2003). 'Fertilizer Use Strategy in the Emerging era of Liberalisation and Class Equity' mimeo, Institute of Economic Growth, Delhi.

Gibson, John (1998). 'Indirect tax reform and the poor in Papua New Guinea', *Pacific Economic Bulletin,* 13(2): 29–39.

Gladwin, C., Randall, A., Schmitz, A. and E. Schuh (2003). 'Is Fertilizer a Public or Private Good in Africa?', *African Studies Quarterly,* available at http://web.africa.ufl.edu/asq/v6/v6i1a13.htm

Goldstein, M. (1998). *The Asian Financial Crisis*, Washington, D.C.: Institute for International Economics.

Grenville, S. (2004). 'What sort of Financial sector should Indonesia have?', *Bulletin of Indonesian Economic Studies*, 40(3), forthcoming December.

Grosh, Margaret; Paul Gewwe (eds) (2000). Designing Household Survey Questionnaires for Developing Countries: Lessons from fifteen years of the Living Standards Measurement Study, Washington, D.C.: World Bank.

Hansen, H., and F. Tarp (2000). 'Policy Arena Aid Effectiveness Disputed'. *Journal of International Development*, 12: 375–98.

Hansen, H., and F. Tarp (2001). 'Aid and Growth Regressions', *Journal of Development Economics*, 64: 547–70.

Harberger, A. (1985). 'Lesson for Debtor-Country Managers and Policymakers' in G. Smith and J.Cuddington (eds), *International Debt and the Developing Countries*, The World Bank, Washington DC, USA, pp. 236–57.

Haughton, J. (1998). 'Estimating, Tax Buoyancy, Elasticity and Stability', African Economic Policy Paper, Discussion Paper No. 11, Harvard Institute for International Development.

Hausman, J. (1980). 'The Effect of Wages, Taxes and Fixed Costs on Women's Labor Force Participation and Labor Supply' *Journal of Public Economics*, 14(2): 161–94.

Heady, C. (2004). 'Taxation Policy in Low-Income Countries', in T. Addison and A. Roe (eds.) *Fiscal Policies for Development,* Basingstoke, UK and New York: Palgrave-Macmillan

Heller, P. (1997). 'Fiscal Policy Management in an Open Capital Regime', IMF Working Paper WP/97/20. Washington, D.C.: IMF

Hermes, N. and R. Lensink (2000). 'Fiscal Policy and Private Investment in Less Developed Countries' paper for the WIDER project on *New Fiscal Policies for Growth and Poverty Reduction*.

Hutchinson, M. (2002). 'A Cure Worse than the Disease? Currency Crises and Output Costs of Supported Stabilization Programs', in M. Dooley and J. Frankel (eds), *Managing Currency Crises in Emerging Markets*, Chicago: University of Chicago Press.

International Monetary Fund (2000). *Review of the Burkina Faso Economy*, available on the website www.imf.org.

Jansen, K. (2002). 'The Scope for Fiscal Policy: with Examples from Thailand', Working Paper No. 369, The Hague: Institute of Social Studies.

Jha, R., Murthy, K, H. Nagarajan and A. Seth (1999). 'Real Consumption Levels and the Public Distribution System in India', *Economic and Political Weekly,* 34: 919–27.

Jha, R. (2001). *India: Country Strategic Opportunity Paper*, Rome: IFAD.

Jha, R. (2002). 'Downward Rigidity of Indian Interest Rates'. *Economic and Political Weekly*, 37(5): 469–74.

Jha, R. (2003). *Macroeconomics for Developing Countries,* 2nd edn, London and New York: Routledge.

Jha, R. (2004a). 'Macroeconomics of Fiscal Policy in Developing Countries', in T. Addison and A. Roe (eds) *Fiscal Policy for Development, Poverty, Reconstruction and Growth,* Basingstoke, UK and New York: Palgrave-Macmillan

Jha, R. (2004b). Innovative Sources of Development Finance: Global Cooperation in the Twenty-First Century, *The World Economy*, 27(2): 193–214.

Kaplan, E. and D. Rodrik (2001). 'Did the Malaysian Capital Controls Work?', NBER Working paper 8142, February 2001.

Keane, M. and R. Moffitt (1998). 'A Structural Model of Multiple Welfare Program Participation and Labor Supply' *International Economic Review*, 39(3): 553–89.

Kenward, L. (2002). 'From the Trenches: the first year of Indonesia's Crisis 1997–98', Centre for Strategic and International Studies, Jakarta

Killick, T. (1999). 'Making Adjustment Work for the Poor', *ODI Poverty Briefing*, May.

Kopits, G. and S. Symansky (1998). *Fiscal Policy Rules*, IMF Occasional Paper, no. 162, Washington, D.C.:IMF.

Krugman, P. (1998). 'Heresy Time', unpublished manuscript, MIT.

Lambert, Peter (1993). *The Distribution and Redistribution of Income: A Mathematical Analysis,* 2nd edn, Manchester University Press.

Lokshin, M. and M. Ravallion (2000). 'Short-Lived Shocks with Long-Lived Impacts? Household Income Dynamics in a Transition Economy' World Bank Working Paper.

Lustig, N. (2002). 'Crises and the Poor: Socially Responsible Macroeconomics' *Economia 2000* Fall.

Mavrotas, G. (2003). 'Which Types of Aid have the most impact?', Discussion Paper No. 2003/85, WIDER, Helsinki.

Meerman, J. (1979). *Public Expenditure in Malaysia: Who Benefits and Why?,* Ministry of Finance, Government of India (1997) *Public Subsidies in India.*

Ministry of Finance, Government of India (1997) *Subsidy Reform in India.*

Ministry of Finance, Government of India (2003). *Economic Survey: 2002–03.*

Morrissey, O. (2002). 'Making Debt Relief Conditionality Pro-Poor' WIDER Discussion Paper No. 2002/04. WIDER: Helsinki.

Muganyizi, T. (2002). 'Fiscal Policy and Monitoring: The Tax Revenue Side in Tanzania', mimeo, The World Bank, Washington, D.C.

Munoz, S. and S. Cho (2003). 'Social Impact of a Tax Reform: The Case of Ethiopia', IMF Working Paper WP/03/22.

Newbery, David and Nicholas Stern (1987). *The Theory of Taxation for Developing Countries*, Oxford: Oxford University Press.

Odedokun, M. (2004). 'Introduction: Sustainability of Development Financing: Multilateral Issues and Perspectives' *The World Economy*, 27(2): 121–5.

Panagariya, A. (2002). 'Stamping in Nutrition' *Economic Times,* 24 April.

Pearce, David W. (1986). *The MIT Dictionary of Modern Economics*, 3rd edn, Cambridge, MA: MIT Press.

Radelet, and J. Sachs (2000). 'The Onset of the East Asian Financial Crisis' in P. Krugman (ed.), *Currency Crises*, Chicago: University of Chicago Press, 105–62.

Rajemison, Harivelo and Stephen D. Younger (2000). 'Indirect Tax Incidence in Madagascar: Estimations Using the Input-Output Table', Cornell Food and Nutrition Policy Program Working Paper #106.

Reinhart, C. Rogoff, K. and M. Savastano (2003). 'Debt Intolerance' *Brookings Papers on Economic Activity*, no.1.

Reserve Bank of India (2000). *Reserve Bank of India Bulletin*, Bombay.

Rodrik, D. (1998). 'Why Do More Open Economies Have Bigger Governments?', *Journal of Political Economy*, 106(5): 997–1032.

Sahn, David E. and Stephen D. Younger (2002). 'Estimating the Incidence of Indirect Taxes in Developing Countries', in *Poverty* Analysis *Tool Kit,* The World Bank.

Saposnik, Rubin (1981). 'Rank-Dominance in Income Distributions', *Public Choice*, 36: 147–51.

Schkolnik, M. (1992). 'The Distributive Impact of Fiscal and Labour Market Policies:Chile's 1990–1 Reforms', Innocenti Occasional Papers, Economic Policy Series, Number 33.

Selowsky, M. (1979). *Who Benefits from Government Expenditure?* New York: Oxford University Press.

Shome, P. (1995). *Tax Policy Handbook,* International Monetary Fund: Washington DC.

Shorrocks, Anthony F. (1983). 'Ranking Income Distributions', *Economica,* 50: 3–17.

Shoven, John B. and John Whalley (1984). 'Applied General Equilibrium Models of Taxation and International Trade: An introduction and survey', *Journal of Economic Literature,* 22(3): 1007–51.

Slack, Enid and Richard M. Bird (2002). 'Land and Property Taxation', mimeo, World Bank.

Stiglitz, J. (2002). *Globalization and its Discontents*, New York: W.W. Norton.

Tanzi, V. (1993). 'Fiscal Deficit Measurement: Basic Issues', in M. Blejer and A. Cheasty (eds), *How to Measure the Fiscal Deficit*, IMF, Washington, DC, USA, pp.8–21

Taylor, J. (2000). 'Making Policy in a Changing World: Comment', in G. Perry and J. Tobin (ed.), *Economic events, ideas, and policies: The 1960s and after,* Washington D.C.: Brookings Institution Press, pp. 72–81

Teera, J. (2002). 'Tax Performance: A Comparative Study', Department of Economics, University of Bath Working Paper No.01/2002.

UNCTAD (2000). 'The Least Developed Countries 2000 Report', Geneva.

van de Walle, D. (1995). 'Incidence and Targeting: An Overview of Implications for Research and Policy', in D. Van de Walle and and K. Nead (eds), *Public Spending and the Poor: Theory and Evidence*, Baltimore, Maryland: John Hopkins University Press for the World Bank.

van de Walle, D. (1998). 'Assessing the Welfare Impacts of Public Spending', *World Development*, 26(3), 365–79.

World Bank (1991). 'Lessons of Tax Reform', Washington, DC: The World Bank

World Bank (1992). 'Structural Adjustment and the Level and Composition of Public Expenditures', in *Adjustment Lending and Mobilization of Private and Public Resources for Growth*, World Bank Policy and Research Series 22.

Yitzhaki, Shlomo, and Slemrod, Joel (1991). 'Welfare Dominance: An application to commodity taxation', *American Economic Review,* 81: 480–96.

Younger, Stephen (1993). 'Estimating Tax Incidence in Ghana: An exercise using household data', Cornell Food and Nutrition Policy Program Working Paper 48.

Younger, Stephen D., David E. Sahn, Steven Haggblade, and Paul A. Dorosh (1999). 'Tax Incidence in Madagascar: An analysis using household data', *World Bank Economic* Review, 13: 303–31.

Younger, S. (2003). 'Benefit on the Margin: Observations on Marginal Benefit Incidence', *World Bank Economic Review*, 17(1), 89–106.

Zee, H. (1996). 'Empirics of Cross-country Tax Revenue Comparisons', *World Development*, 24(10): 1659–71.

Zolotareva, A., Drobyshevskil, Sinelnikov, S. and P. Kadochnikov (2002). 'A Stabilization Fund for Russia: Problems and Prospects', *Problems of Economic Transition*, 45(2): 5–85.