

Training Module

Training Modules of the Research Programme Economic Policies, MDGs and Poverty

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FISCAL POLICY



1 INTRODUCTION

1.1 FISCAL POLICY AND THE MDGs

This module outlines the basic principles of fiscal policy in order to provide a macro framework for the achievement of the Millennium Development Goal targets in 2015.¹ The prevailing macroeconomic framework used by governments of developing countries is that derived from stabilisation and structural adjustment programmes, which focus on price stabilisation and static allocative efficiency. These programmes are characterised by theoretical ambiguities at several levels, and their basic assumptions are at variance with the realities of developing countries. This helps explain why structural adjustment programmes implemented in many developing countries fail to achieve their stated goals of rapid economic growth, poverty reduction and balance of payments sustainability. In the words of a World Bank economist:

How to explain that, after sustained involvement and many structural adjustment loans, and as many IMF's Stand-bys, African GDP per capita has not budged from its level of 20 years ago? Moreover, in 24 African countries, GDP per capita is less than in 1975, and in 12 countries even below its 1960s level ... How to explain the recurrence of Latin crises, in countries such as Argentina, that months prior to the outbreak of the crisis are being praised as model reformers ... How to explain that the best 'pupils' among the transition countries (Moldova, Georgia, Kyrgyz Republic, Armenia), after setting out in 1991 with no debt at all, and following all the prescriptions of the IFIs [international financial institutions], would find themselves 10 years later with their GDPs halved and in need of debt-forgiveness? *Something is clearly wrong.* (Milanovic 2003, 679, emphasis added)

"Fiscal Policy should not be a continuous struggle against deficits and inflation, but a tool for poverty reduction... and reaching the MDG targets."

These strategies have been associated with only slow improvements in the welfare of the poor; that is, they have not in most cases generated a growth process that would make it possible to achieve the MDGs.² The inability of stabilisation and structural adjustment programmes to contribute to faster gains for the poor highlights the need to review their analytical basis in mainstream economics. The purpose of this training module is to carry out that review, then to provide the analytical basis for a growth framework consistent with achieving the MDG targets. To that end, the module begins by defining some basic concepts.

1.2 BASIC CONCEPTS

Fiscal policy includes the taxation and expenditure policies of the central government, which are normally implemented by the ministry of finance. This Training Module will focus on the role of fiscal policy in maintaining macroeconomic stability and fostering growth. Other functions of fiscal policy, involving the use of the composition of expenditure and tax structure to attain a fairer distribution of wealth and other social goals will be treated in a separate module.

Monetary policy, covered in Module 2, refers to the government's regulation of money supply and of interest rate levels. It is typically executed by the country's central bank, either in its capacity as regulator of the financial sector or through its participation in open market operations and government deficit financing. In executing its policies, a central bank operates under varying degrees of accountability, sometimes inaccurately subsumed under the term 'central bank independence'. Since there is a close interaction between fiscal policy and monetary policy, at certain points in this module it is also necessary to refer to the latter.

Macroeconomic stability is one of the goals of fiscal and monetary policy. This is a much misused term that is rarely defined. Its misuse occurs 1) when it is not placed in country context, but treated as if its specific manifestations should be the same in every country; and 2) when it is assigned priority over all other outcomes. The latter form of misuse is typically justified on the argument that it is a necessary and *prior* condition for the achievement of all other policy goals. When stated as a general proposition, the need to give priority to macroeconomic stability is rarely derived from rigorous theory. When applied to a particular country, its validity is rarely established empirically. Since assigning first priority to macroeconomic stability typically implies policy rules and external conditionalities that act as a constraint on pro-poor expenditures and on the pursuit of MDG targets, the concept must be defined rigorously.

Macroeconomic stability should not be confused with *macroeconomic equilibrium*. The former is an empirical outcome, while the latter is a construct within an abstract model with no empirical counterpart. An economy is macroeconomically unstable if key *economic aggregates fluctuate excessively* over time. In order to be operational, this definition requires identification of the aggregates that signal the need for a policy response, and a definition of 'excessive' fluctuation (since market economies are dynamic and in continual flux to some degree, anyway). Fluctuations can be judged as excessive on the basis of two general rules: 1) when they undermine the achievement of outcomes sought by society and/or goals pursued by the government through its policies; or 2) when inherent in them is a tendency to increase in amplitude, which will undermine those outcomes at some future point in time. Fluctuations in variables that have no impact on desired outcomes, even if they are considered extreme by some reasonable judgement, are of no policy importance.

The principal tasks one faces are, then: identify desired outcomes, specify the macro variables that determine them, and differentiate between excessive and non-excessive fluctuations.

Identifying economic outcomes involves value judgements. The international consensus on poverty reduction implies that the basic outcome sought by policy should be sustained poverty reduction in the long run, manifested in the medium term by the achievement of the MDG targets by 2015. Fluctuations can be defined as 'excessive' if they undermine the achievement of the MDG targets or the minimisation of shortfalls in that process. Short run outcomes should be part of this definition, since brief fluctuations that cause human hardship would be undesirable even were medium and long term goals are achieved.

The key macro variables determining sustained poverty reduction are the rate of economic growth and the distribution of current income. Economic growth is determined on the demand side by investment (private and public), current government expenditure, exports, and the degree to which output is constrained or facilitated by the central bank's monetary policy. Economic growth on the supply side, namely, potential output, is determined by investment (public and private), the quality of the labour force, and technical change. Current public expenditure indirectly affects potential output by its impact on the quality of the labour force. Exports and the imports they facilitate may affect technical change. If fluctuations in any of these variables undermine growth or worsen inequality, then they can be judged as excessive, requiring policy measures to stabilise them.

This discussion suggests that the key variables to monitor when trying to maintain macroeconomic stability are investment (public and private), current government expenditure on economic and social services, and exports, since they each affect both growth and distribution, and growth on both the demand and supply sides. Therefore, it would be an inappropriate stabilisation policy to place the burden of stabilisation adjustment on the public sector (investment and relevant current expenditures). Notwithstanding this obvious inference, it is typically the case that the entire burden of stabilisation adjustment is placed on the public sector.

The standard approach to macro instability is to assume that the meaning of the term is self-evident and that it undermines all important social goals, and then go directly to inflation as its most important manifestation. A further step is to assert that the lower the rate of inflation, the easier it will be to achieve all important social outcomes. This implicitly assumes that a controlled inflation is the overwhelming determinant of those outcomes, and policies to achieve its reduction must precede and set the limit to all other policies. It might seem more logical to consider this inflation hypothesis in the module on monetary policy. However, it must be treated here because the policy measures it proposes imply no active role for fiscal policy.

To consider the inflation hypothesis rigorously, one must first specify the process by which inflation might undermine sustained poverty reduction and the achievement of the MDGs in the medium term. Let us assume that inflation negatively affects growth by increasing investors' perception of risk, thus lowering the rate of capital accumulation. It might be that the negative effect is continuous, in which case the elasticity of growth with respect to inflation is the key empirical relationship. Alternatively, there might be a 'trigger' rate of inflation, below which there is no effect and above which growth is negatively affected. Empirical evidence from cross country regressions seems to confirm the latter hypothesis. It further indicates that the 'trigger' rate is about 40 per cent (Bruno 1995, Bruno & Easterly 1996). From this evidence, one can conclude that inflation becomes 'excessive' at forty percent, whereas below that rate it is not excessive, since it does not appear to significantly affect the social goal of growth.

While cross country regressions must be interpreted carefully, the Bruno and Easterly study suggests that the 'default assumption' by international agencies and central banks should be that moderate inflation in itself does not undermine growth. The trigger rate would vary across

countries. For example, one might expect it to be higher in Zambia – with its long history of double-digit inflation rates - than in Benin, whose rates have been consistently low. The average for 1980-2005 for the former is over 40 per cent, and for the latter about five per cent. This default assumption implies, in turn, that the possible costs of inflation reduction policies should be inspected carefully when inflation is below 40 per cent, because the benefits may be insignificant.

This is particularly the case because very few developing countries have manifested inflation rates over 20 per cent for extended periods, much less 40 per cent. Latin America suffered triple digit inflation in the 1980s, but by the mid-1990s hardly any country in that sub-continent was having inflation rates above 10 per cent annually. In Asia, rates were quite low in the 1990s, with signs of deflation in some countries. Over the 25 years from 1980 to 2005, the sub-Saharan region had many countries with double-digit inflation, some averaging above 40 per cent. During the 1990s, though, average rates fell dramatically, with rates in high inflation countries converging towards those in low inflation countries (see Hailu, Stever & Weeks, Chapter 2, 2006).

Though existing evidence indicates that even inflation well into double digits does not affect growth, it might be that in itself it would negatively impact on social goals. Following economic methodology, specifying a negative inflation effect is first a theoretical exercise. It is relevant to point out, however, that macroeconomic models, both short and long run in timeframe, invariably assume *that money is neutral*. Money is neutral only if, at full employment general equilibrium, increases in money supply – which must lead to equal proportional increases in prices – have no impact on any real variable (including actual interest rates), so that in such models inflation can occur only at full utilisation of resources. In other words, within the standard macro models, a doubling in price level at full employment is but a trivial matter, and those who might think otherwise are guilty of ‘money illusion’.

If in basic models changes in price level have no important impact, how then does one reach the conclusion that reducing the rate of inflation should be every government’s first policy priority? The answer to this question begins with the distinction between static and dynamic comparative analysis. Strictly speaking, a price increase between two points of general equilibrium is not inflation, which is defined as a continuous rise in the price level. However, this definition begs the question of why a continuous rise should have negative effects when a ‘one-off’ increase does not. The justifications for considering inflation to be a problem in itself fall into two general categories, distributional effects and expectation effects.

Distributional effects result when inflation has a direct impact on the distribution of income, be it either functional distribution (by group or class) or size distribution (across households). It is sometimes argued that ‘inflation is bad for the poor’, i.e., even if it has no significant impact on the rate of growth, it lessens the poverty-reducing effect of growth by redistributing income from the poor to the non-poor. While this may be the case in some countries during some periods, there is no evidence of a general rule, and no obvious reason why there should be one. With regard to **expectation effects**, it may be that inflation has a substantial effect, but it has no effect on the rate of growth when below the trigger point, and has no systematic distributional effects. Thus, it is not clear why expectation effects would be of policy concern.

From this discussion, one can conclude that macroeconomic stability is a necessary and desirable policy goal, but in as far as it impacts on growth and poverty reduction, its specification in terms of the acceptable rate of inflation will vary across countries. There is no theoretical or empirical support for a policy to target the same inflation rate in every country. Policy makers can make macroeconomic stability a derivative from growth and poverty-reduction goals rather than the reverse. Another way to express this relationship is: if stabilisation is defined with respect to

inflation results, there are desirable and undesirable stabilisation outcomes. Low inflation associated with low growth may be defined as a stabilised economy by some, but it is an unacceptable outcome that requires policy intervention to correct. How fiscal policy might do so is discussed below.

1.3 PRICE- AND QUANTITY-DETERMINED ECONOMIES

Section 1.2 above considered the relationship between macroeconomic stability and the potential growth rate of a country's economy, and concluded that fiscal policy need not be a derivative from general rules about inflation rates. This section pursues that discussion further, presenting an analytical framework in which fiscal policy can be analysed. There are two broad theoretical approaches to macroeconomic analysis: price-determined and quantity-determined frameworks, with the latter also called demand determined. In the neo-classical macroeconomic model, economies are *price determined*. The economy reaches a unique full employment general equilibrium unless it is prevented from doing so by private or public price 'distortions'. In contrast, the quantity-determined framework incorporates the possibility that the level of output is limited by one or all of the components of aggregate demand: consumption, private investment, government expenditure or exports.

Consider the simple case of a closed economy that has no public sector and produces only one product (see Weeks 1989). In the price-determined framework, all markets clear in an instantaneous process, in which there are no exchanges at prices other than those in the price set that would prevail at full employment general equilibrium. In this theoretical construct, consumers and producers take prices as 'signals' to determine the quantities they buy and sell. If all markets clear automatically at the single full employment price set, then it follows that any action by private or public agents to inhibit market adjustment in prices will result in an outcome below full employment. Assuming that there are no private constraints to *instantaneous* price adjustment (e.g., no market power wielded by private agents), the full employment equilibrium price set is unique, and all markets are fully developed, it follows that the role of public policy is extremely limited, i.e., it should be 'neutral' and 'passive'. Fiscal policy would be 'neutral' in the sense that it should not alter the incentives of private agents from making the choices that would yield the general equilibrium price set. That is:

- 1) taxes should not affect the decision of private agents to choose between income and 'leisure' (e.g., there should be no income tax);
- 2) neither taxes nor expenditures should affect the relative profitability of commodities (there should be no tariffs, export levies or subsidies);
- 3) expenditures should not impact on the consumption allocation decisions of households (no sales taxes that discriminate among commodities and no subsidies to commodities);
- 4) governments should not 'distort' capital markets by competing with private agents for funds (no funding of the fiscal deficit through bond sales); and
- 5) since the money market is in equilibrium, deficits should not be funded through monetisation, which would create an excess supply of money that generates inflation.

As a practical matter, governments must tax, spend, and sometimes run deficits. The price-determined framework accepts this and counsels that the inherently-distorting operations of the public sector should be minimised. This implies levying taxes on a uniform basis (a single tariff rate

for all imports, for example); minimising fiscal deficits; and restricting government operations to national security, social services, and general administration. In summary, there is no scope for a purposeful fiscal policy.

BOX 1.1

Implications of the Price-Determined Framework

The theoretical basis for the price-determined framework is weak. It cannot be demonstrated that there is a real world process that ensures the realisation of the full employment price set. Nor can it be demonstrated that the full employment price set is unique. The latter is a serious problem, because if the price set is not unique, the concept of 'distortions' is called into question. A distorted outcome is defined in relation to a non-distorted one. If there is more than one non-distorted outcome, one cannot be sure that the prices in an economy with public sector interventions are substantially different from some non-distorted outcomes.

While price-determined systems may seem abstract curiosities, they are the basis for any statement alleging that governments 'distort' the economy. One cannot allege the existence of distortions without simultaneously asserting the existence of a unique non-distorted economy. Consider the apparently simple statement, 'tariffs distort profitability between importables and exportables'. The validity of this statement requires the prior demonstration of the existence of a unique full employment general equilibrium. Since this cannot be demonstrated generally, even in theory, the correct statement would be: 'tariffs alter profitability between importables and exportables'. The practical difference between the use of one or another of these two words, namely, 'distort' or 'alter', is at the core of policy debate. If public sector actions distort the economy, that result leads to inefficiency that should be avoided or minimised. If those actions alter the economy, then a subjective policy assessment is required in order to determine whether the alteration is net beneficial to society.

1.4 FISCAL POLICY IN A DEMAND-DETERMINED ECONOMY

If economies are demand determined, then the existence of a general equilibrium price set becomes a moot point, because relative prices derive from the level of aggregate demand, and change as aggregate demand rises and falls. Therefore, relative prices are not 'signals' to producers and consumers, but result from their production and consumption decisions. Since prices do not determine quantity choices by consumers and producers (since they rather derive *from* them), they are not indicators of efficient allocation. This implies that public sector interventions should be judged on a pragmatic basis in terms of social cost and social benefit. In the case of fiscal policy, active macroeconomic interventions are justified to foster growth and move the economy towards full employment. Taxes and expenditures should be similarly judged, and not in terms of whether they violate non-relevant abstract principles of efficient allocation. The criterion for judgement should be whether taxes and expenditures achieve the goals set by society. When those goals conflict, an empirical analysis of trade-offs is required.

The demand-determined framework considers the social objective of sustained growth to be one for which the public sector provides the residual stimulus to maintain the economy at its productive potential. In the short and medium run this involves counter-cyclical policies,³ and, in the long-run, investments to increase aggregate supply.

Apart from the inherent weaknesses of this price-determined framework, as explained in Box 1.1, moving from the world of the abstract to the concrete characteristics of most developing countries reveals why that framework is not applicable. First, during two decades of stabilisation and structural adjustment, most of these economies have been demand-determined by high real interest rates, fiscal austerity or heavy debt burdens—and in some cases by all three. Second, many

of the economies have suffered from worsening terms of trade, which have had a net contractionary effect on external demand. Third, and frequently ignored, major prices in many developing economies are not primarily market determined. It is obvious that the nominal interest rate is an administered price if the monetary authorities practice inflation targeting. In addition, official aid flows and debt servicing represent a substantial portion of the balance of payments, and neither is directly exchange-rate sensitive. As a result, the value of a 'floating' exchange rate is determined to a great extent by non-market flows. For these reasons, the demand-determined framework is more applicable to developing countries.

Since macroeconomic stability should be defined for each country, consistently with the goal of poverty reduction, and economies are demand determined so that fiscal interventions do not *per se* create distortions, one can specify the various functions of an active fiscal policy.

First, there is the short-run **counter-cyclical function**, in which fiscal policy is used to maintain a stable and high rate of growth. Market economies are driven by the decisions made in the private sector and by external effects. Changes in domestic and external economic conditions, sometimes called 'shocks', can result in a recession. Fiscal policy can be used to counter these changes in the short run, by means of increases in expenditure or reductions in taxes. In order to play this role, fiscal policy should not be constrained by arbitrary deficit limits, which are discussed below.

In general, this role of fiscal policy is less effective for counter-cyclical demand management in developing countries than in developed ones. This is so because product and factor markets tend to be less efficient in their operations in the former, while their economies tend to be import-dependent. Import dependency implies that fiscal measures taken to expand demand in order to counteract recessionary tendencies may result in balance of payments difficulties. However, one should not conclude from this result that counter-cyclical policies are irrelevant in developing countries, but only that they will tend to be more effective the more developed the country is.

Secondly, there is the medium- and long-term **growth-enhancing function**, in which fiscal policy is used to increase the rate at which potential output expands. While some social expenditures – such as those on health and education – tend to increase potential output, the growth-enhancing function derives primarily from public investment. If, for example, there are demand-driven inflationary pressures requiring a reduction in government expenditure, it is an unwise policy to adopt the common response of placing most of the burden on public investment. The effect is a reduction in the economy's growth potential. This is especially the case in moments when private sector investment declines.

Thirdly, there is the **equity-fostering function** of fiscal policy, in which taxation and expenditure are used to reduce inequality or slow its increase. The less developed the country, the less effective will be its tax system in performing this function. The potential for the redistributive function is primarily achieved through personal and corporate taxes. Because low per capita income is associated with a high proportion of the population not holding paid jobs at medium and large enterprises, these direct taxes cover a minority of income earners. It may be that in many low-income countries the best that could be achieved would be a minimisation of the regressive structure of their main sources of revenue, namely, taxes on the consumption of goods and services. However, government expenditures, including public investment, can be effectively used to reduce inequality even in low-income countries.

These three functions – counter-cyclical, growth-enhancing and equity-fostering – together constitute an active pro-poor fiscal policy that seeks to maximise the poverty-reducing impact of growth. The first of such functions does this in the short run by reducing fluctuations in poor

people's incomes; the second does so in the long run by raising the potential growth rate in such a manner as to bring relative advantages to the poor; and the third operates continuously to redistribute income in favour of the poor. To consider how each of these functions is realised in the implementation of policy, it is necessary to present the analytical basis of fiscal interventions. Country case studies are presented in Boxes 1.2 – 1.6 (pages 23-27).

2 ANALYTICAL BASIS OF FISCAL POLICY

2.1 A REVIEW OF FISCAL ANALYSIS

Before turning to the mechanics of fiscal policy, it is necessary to pursue further the discussion of analytical frameworks. The quantity- or demand-constrained framework can be traced back to Malthus, and was first specified rigorously in the 1920s and 1930s. The framework is associated with the later work of John Maynard Keynes (Keynes 1973), who had been quite orthodox in his economics prior to the late 1920s. The orthodox theory of the time was based on what became known as the Classical Dichotomy, in which the quantities in an economy (its 'real' side) could be established independently from determining the general price level. These real quantities – including relative barter prices – derived from relative factor scarcities since the real economy was always at full employment general equilibrium. This approach implied that there could be involuntary unemployment only if the labour market were 'distorted' by government intervention or excessive trade union power. The Classical Dichotomy was demonstrated to be false by orthodox economists in the 1930s (see Weeks 1989, Chapter 4), but this has not prevented its perseverance in a thinly-disguised form.

The theory of the price level in the Classical Dichotomy was based on the quantity theory of money, summarised by

$$vM = Py$$

(M = money supply, v = velocity of circulation, P = price level, y = real output).

In its simplest version, the quantity theory presumed that 'v' was constant and that 'y' was fixed at the full employment level of output. This implied a direct relationship between money and prices. Money supply 'M' was treated as exogenously determined by the central bank, so that changes in 'M' would cause changes in 'P'. Inflation was due to excess money growth or, alternatively, to 'too much money chasing after too few goods'. Because the economy is treated as being at full employment, there is no role for an active fiscal or monetary policy. Instead, these are viewed as bound by strict rules to prevent policy makers from 'distorting' effective and efficient markets.

In the demand-determined framework, fiscal and monetary policy can be used to control aggregate demand and changes in the general price level (i.e., the inflation rate), with a view to *achieving* full employment and price stability, rather than assuming them to be automatic outcomes. In a closed economy, aggregate demand includes three elements: private consumption, private investment and government spending. In an open economy, aggregate demand also includes net exports (exports minus imports). Consumption is a positive function of disposable (post-tax) income, and positively but weakly related to the level of interest rates. For example, when consumer credit and mortgages become more expensive, disposable income falls and consumption tends to decline with it. In this framework, investment is a negative function of the level of interest rates and, more importantly, a positive function of the level of output anticipated by entrepreneurs. Government expenditure is set by policy makers to achieve a range of policy goals.

When the economy is operating below capacity, the government could impart a fiscal stimulus either by increasing expenditure or reducing taxes, both of which would increase the fiscal deficit or reduce a surplus. This will increase the level of demand, output and employment in the economy. Conversely, if the economy is near full employment and there is inflationary pressure, the government would do the opposite. The ensuing spending cuts and higher taxes would reduce inflationary pressures. In principle, if the government manipulates its fiscal and monetary policy stance competently, it should be able to eliminate the economic and maintain high levels of employment continuously.

During the 30 years from 1945 to 1975, the demand-determined framework represented economic orthodoxy. But the sharp increases in petroleum prices during 1973-1974 exerted inflationary pressures on the economies of most developed countries, which rejuvenated the pre-Keynesian price-determined framework, self-designated in its new incarnation as the New Classical Economics. In the realm of economic policy, Inflation control became the new priority of economic policy, based on the price-determined conclusion that establishing a low-inflation macroeconomic environment would allow unregulated markets to restore growth.

That fiscal policies influence aggregate nominal output was not controversial. The disagreement was over 1) whether this would be effective in influencing real output and employment; and over 2) its effect on macroeconomic stability. Like the pre-Keynesians, the new classical economists analysed economies on the presumption of continuous full employment. Within this analysis, it is obvious that neither fiscal policy nor monetary policy can affect real output, since it is always near its maximum value. As a result, the role of fiscal and monetary policy became purely defensive, namely to avoid mistakes and correct them if they occur. Thus, it is logical that the new classicals would stress **policy rules** for governments, rather than the **policy discretion** that had characterised the demand-determined framework.⁴ Very much part of the pre-Keynesian revival were the alleged inefficiency and wastefulness of the public sector, a tendency of state intervention to undermine private sector activity,⁵ and the inherent costs of an active monetary policy.⁶ The political consequence of this framework was and is a 'crowding out' of the goals of full employment and equity. In their place, the present incarnation of new classical economics in adjustment and stabilisation programmes stresses limiting government action to the improvement of markets, establishing 'confidence' in economic policy, and promoting trade and foreign investment.

2.2 THE IMF FINANCIAL PROGRAMMING MODEL

The change in theoretical approach is epitomised by the IMF's financial programming (FP) model. Though this model was developed in the late 1950s, its emergence as the accepted macro-policy framework for developing countries, beyond the IMF itself and its sometimes reluctant clients, would not come to pass until the 1980s. It provides an instructive guide to the use (and non-use) of fiscal and monetary policy to achieve macroeconomic stabilisation in developing countries from the New Classical perspective. The peculiarity of Financial Programming is that it aims to achieve internal and external macroeconomic equilibrium at the same time.⁷ The political importance of this model cannot be overemphasised.

The FP model extends the quantity theory of money (QTM) from a closed economy context to an open economy, in order to link domestic equilibrium in the money market with external (balance of payments) equilibrium. As a result, it offers policy recommendations that apparently allow governments to address both sources of disequilibria simultaneously.

The basic FP model is based on six assumptions.⁸

$$1) M^s = DC + IR$$

(money supply = domestic credit + the domestic equivalent of international reserves.)

This assumption implies that the domestic supply of money has two parts: 1) domestic credit (DC) created through the monetisation of public deficits by the central bank and multiplied through the commercial banking system; and 2) the conversion of net foreign currency inflows, international reserves, into domestic currency (IR). For example, other things constant, when an exporter sells goods abroad and is paid in hard currency, this is exchanged either at the central bank or in the commercial banking system for domestic money, and thus the domestic money supply rises.

$$2) M^d = vPy$$

(money demand is a stable function of the price level and real output.)

This assumption is QTM, a proposition at least two hundred years old. It states that the velocity of circulation is stable.

$$3) y = y^*$$

(real income is fixed at the full employment level.)

This assumption implies that the economy is in full employment general equilibrium. Since 'y' is constant, determined by unregulated markets, any changes in nominal GDP ($Y = Py$) must be due to changes in the price level.

4) A fixed exchange rate.

5) International immobility of capital.

These two assumptions seemed reasonable in the 1950s and 1960s, under the Bretton Woods System. The international system of exchange rates fixed to the U.S. dollar ended in 1971 when the US government cancelled the conversion of its currency into gold at a fixed dollar price (which involved a unilateral cancellation of an international treaty). This institutional change, though fundamental and destabilising, did not affect consideration of the FP model as an abstract framework.

$$6) X = \bar{X}$$

(fixed exports.)

The assumption that exports are fixed simplifies the analysis. It presumes that a country's exports depend primarily on demand from the rest of the world.

The inner functioning of this model can now be considered. Let us assume that the economy depends fundamentally on internal and external equilibrium. If domestic credit (DC) increases, then the supply of money will exceed demand. But, according to the quantity theory, money is never held idle, so real excess balances will be spent by purchasing goods and services. These goods and services can include non-tradables and tradables. Excess demand for non-tradables will generate domestic inflation, and excess demand for tradables will spill over into higher imports and, therefore, bring a balance of payments deficit.

In order to pay for the excess imports, the buyers will purchase part of the country's international reserves with domestic currency and send the hard currency abroad. The domestic money supply declines together with the reserves (IR falls). The balance of payments deficit will be

eliminated when the money supply returns to its initial level, and it will have a different composition, with a higher share of domestic credit and a lower share of international reserves.

Inflation and balance of payments deficits can persist only if domestic credit increases continuously. Under such circumstances, the economy will suffer persistent inflation and a continuing balance of payments deficit, potentially leading to the exhaustion of the country's foreign currency reserves. In this model, the only agent that can increase DC at will is the government. In other words, a monetised fiscal deficit will generate inflation and balance of payments deficits simultaneously. Thus, if a country experiences continuing inflation and balance of payments deficits, this must be due to excess domestic money created by a fiscal deficit. Fiscal contraction will resolve both problems.

Three implications follow:

- Inflation and balance of payments deficits are caused by macroeconomic mismanagement.
- Governments should limit domestic credit creation to levels compatible with price stabilisation and balance of payments equilibrium.
- The correction of policy mistakes has no lasting impact on real output and income.

These conclusions hold only if the initial assumptions are valid; if markets function smoothly, if the economy is fully competitive, if the QTM is valid, and if there is full employment. If any of these assumptions are invalid, the FP model fails to provide reliable guidance for economic policy-making.

Given the analysis of the FP model, IMF stabilisation programmes normally include three components, aiming to raise economic efficiency, reduce inflation and foster export growth. The first is **import liberalisation**, to increase competition in the domestic market, raise the productivity of capital and labour and foster trade specialisation according to comparative advantage. The second is **devaluation of the currency**, to cut import demand, reduce production costs (especially domestic wages measured in dollar terms) and raise profits of the export sector. The third is **macroeconomic and institutional reforms**:

- a) reduction of the fiscal deficit and strict limits placed on money expansion, with the former achieved through tax increases, privatisations and reductions in spending;
- b) shift of government spending away from capital investment and direct economic intervention, and towards the provision of public goods, especially health and education;
- c) market deregulation, to allow the price system to signal relative scarcities and consumer preferences;
- d) domestic financial liberalisation, which would raise real interest rates, stimulate savings, and raise returns on investment;
- e) changes in labour market regulations to increase so-called flexibility and raise productivity, including alterations in hiring and firing rules, curtailing trade union rights, eliminating collective agreements and protective regulation, and reducing social security benefits;
- f) liberalisation of the external capital account, so as to attract foreign funds, improve the balance of payments, enable technology imports and facilitate access to foreign markets; and
- g) revision of the legal system to strengthen the protection of property rights.

These policy changes, incorporated in stabilisation and structural adjustment programmes, tend to be recessionary in the short run, since domestic demand falls because of the reductions in wages and government expenditure, higher interest rates, and higher import prices resulting from a devaluated national currency. However, since orthodox economic theory presumes that markets work, any such recession is expected to be short-lived. Advocates of such policies assert that, after this transition period, the economy should reach a new equilibrium with greater efficiency and higher output. It would appear that this does not normally happen, as IMF programmes often lead to chronic underperformance (Milanovic 2003, McKinley 2001).

Numerous failures to achieve the outcomes expected from the strategy advocated by the IMF, the World Bank and the U.S. Treasury Department (the 'Washington Consensus') have led to increasingly insistent calls for modification of the conditionality framework associated with that strategy. In the 1990s, such criticism contributed to the development of the 'post-Washington consensus' associated with Joseph Stiglitz,⁹ as well as to significant modifications of the mainstream policy approach through the introduction of the Highly Indebted Poor Country Initiative (HIPC) for debt relief.

3 PERCEIVED CONSTRAINTS TO PRO-POOR FISCAL POLICY

3.1 PUBLIC AND PRIVATE INVESTMENT

As mentioned above, this module deals with the macroeconomic role of fiscal policy, not with expenditure make-up or taxation structure, which will be treated in a separate module. A key issue at the macroeconomic level is whether public expenditure in its entirety should be viewed as contributing to aggregate demand, and public investment as making a net contribution to the growth of potential output. This issue is summarised in the term 'crowding out'. It is treated here in so far as it affects aggregate demand in the short run and potential output in the long run. In essence, the crowding out debate revolves around whether an active fiscal policy is inherently self-defeating in its attempt to manage aggregate demand and enhance aggregate supply – which is true by definition if one assumes full employment.

Crowding out occurs when an increase in one element of aggregate demand results in a decrease in another component. At the abstract level, if the economy is at full employment, crowding out can occur between any two elements of aggregate demand. For example, an autonomous increase in private consumption could crowd out private investment. However, for essentially ideological reasons, the term crowding out is invariably used to refer to allegedly negative effects of public expenditure on private expenditure. This section treats crowding out without reference to how public expenditures are financed, which is discussed in the next section dealing with fiscal deficits. The discussion conducted here also limits itself to the interaction between public and private investment, though the argument can be applied to any two elements of aggregate expenditure.

Although orthodox theory insists that public investment crowds out and is less efficient than private investment, there is no firm evidence to support this claim as a general rule across countries. Quite the contrary: there is a large body of evidence indicating that, in low-income countries, public investment generally **crowds in** private investment both upstream and downstream (Roy & Weeks 2003). Public investment can support private investment and output growth if it expands the country's physical infrastructure (roads, ports and airports, water, sewerage and irrigation systems, electricity-generating capacity and transmission lines), if it

boosts labour productivity (for example, through public education and training programmes, public transport or public health provision), or if it fosters private savings. When public investment falls, aggregate private profits decline. This reduces both the incentives and the resources available for private investment.

Even on a theoretical level, the 'crowding out' argument is not generally valid. It would occur when an economy is near full employment. When there are unutilized resources, there is economic space for an increase in all types of expenditure, both public and private. Even if 'crowding out' occurs under these circumstances, it is unlikely to be complete. That is, the elasticity of private investment with respect to government expenditure of any type will be greater than minus one (i.e., less negatively elastic). As a consequence, public investment would be growth-inducing both in its demand and capacity effects, unless the return on the marginal private component were sufficiently higher than on the public component. This can be formally shown using the simple Harrod-Domar model, where 'y' is the rate of growth, 'k' is the incremental capital-output ratio, and 'i' is the share of investment in output. Let the subscripts 'pr' and 'pu' be private and public investment, respectively, and 0 and 1 be two time periods. Without public investment, the warranted (potential) rate of the economy is:

$$Y_0 = [k_{pr}][i_{pr0}]$$

Let the 'crowding out' ratio be λ (the fraction by which public investment reduces private investment), and the private output-capital ratio be the same in both time periods. Then, the new growth rate with public investment is:

$$y_1 = [k_{pr}][i_{pr0} - \lambda i_{pu1}] + [k_{pu}][i_{pu1}]$$

We can compare the two scenarios by subtracting y_0 from y_1 :

$$y_1 - y_0 = i_{pu1}[k_{pu} - \lambda k_{pr}]$$

Crowding out due to the introduction of public investment will reduce the rate of growth if and only if, $k_{pu} > \lambda k_{pr}$.

In other words, only if public investment is more capital-using than private investment by the ratio of crowding out. If the capital-output ratio for public investment is lower than for private investment, public investment never reduces the growth rate, no matter the value of λ , assuming its upper limit to be unity ('total crowding out', i.e., 100 per cent). If crowding out is total, the growth rate falls only if public investments are more capital-using than private ones. Thus, public investment having a negative impact on the capacity-creating source of growth occurs only under the very restrictive conditions in which crowding out is total and private investments use less capital per unit of output. The former is unlikely and the latter can be avoided by judicious public choice of investment projects. The considerable work that has been done on employment-intensive public works can provide practical guidelines to ensure that public investments are not excessively capital-using. Thus, theory and practice suggest that 'crowding out' is unlikely to have a negative impact on growth.

As a final technical observation on crowding-out, a substantial part of private sector investment either does not borrow for investment, or does not do so in the financial markets that

would be affected by government borrowing. Investment by small producers, rural and urban, is often self-financed, or financed from indigenous lenders with little connection to the formal banking system. In addition, foreign investment, to the extent that it is important, is not typically financed from domestic financial markets.

This module does not discuss the institutional constraints on fiscal policy. However, given the frequency of the argument that government expenditure, and public investment in particular, is typically inefficient and associated with corruption, it is necessary to make a few observations. First, it should be noted that the international community has reached a consensus that governments of developing countries should play a more aggressive role in poverty reduction if the MDG targets are to be met. This consensus would be contradicted or reduced to very limited meaning if it were made contingent upon some external definition of 'good governance'.

Second, the basic role of fiscal policy at the macro level, namely, stabilisation of growth and promotion of faster growth, are functions implied by the analytical framework on which fiscal policy is based. If the analytical framework developed above is accepted, then the implied functions of fiscal policy become necessary functions of governments, be the government corrupt or honest, just as the price-determined framework requires governments to pursue certain outcomes such as inflation reduction be the government corrupt or otherwise. By analogy, corruption within the police force of a country is not an argument for fewer police, but for rooting out corruption. The same logic applies to fiscal policy, whatever its analytical basis.

3.2 FISCAL DEFICITS AS A POLICY INSTRUMENT

All aspects of fiscal policy provoke controversy, but none so much as fiscal deficits. In practice, deficits are the tail that continuously threatens to wage the fiscal policy dog, and frequently succeeds in doing so. No discussion of an active fiscal policy is possible without an analysis of the appropriate role and sustainable level of the public sector's expenditure deficit. In support of the following discussion, Annex 1.1 and 1.2 provide a technical presentation, with definitions, of the fiscal deficit... What follows is not intended to cover all aspects and ramifications of fiscal deficits, but only those effects that impact on the role of fiscal policy as a regulator of economies in the short and long run.

The presumption that any increase in a fiscal deficit is *per se* a problem is of relatively recent origin, though it reproduces many of the arguments developed in the first decades of the twentieth century. Depending on one's analytical vantage point, the anxiety about deficits can be viewed as old wine in new bottles, or as having a long and distinguished lineage. Arguments against deficits can be organised into two categories, which are complementary: those that focus on the inflationary effect, and those that stress the crowding out effect. The frequently made assertion that deficits undermine private sector development represents a vague and unspecified combination of both.

Policy-relevant deficits can be defined as follows. The **nominal deficit** is equal to the difference between the total of the items listed as government expenditure and the total of the sources of government income. By definition, the difference is covered by borrowing, explicit or implicit. The nominal deficit is sometimes called the public sector borrowing requirement (PSBR). This deficit is of limited policy interest because it can be misleading with regard to the economic effect of government operations. For example, in South Africa, in the mid-1990s, an agreement was reached as part of the end of *apartheid* to the effect that any white civil servant who wished to retire early would be allowed to do so on extremely favourable terms. This required the

government to make a large, one-off payment to the civil service retirement account, which entered the government accounts as an expenditure. However, since actual payments to pension holders would come only in later years, that initial large payment represented government saving, not expenditure. The nominal deficit was reported as over six per cent of GDP, prompting claims that such an expenditure was excessive. This represented a confused misinterpretation, albeit in some cases an intentional one, as the expenditure flow deficit was barely three per cent of GDP (see Standing, Sender and Weeks, 1996, Chapter 2). On the revenue side, the nominal deficit includes official development grants, which further adds to the confusion since it does not reflect national revenue generation.

More useful for policy is the **primary deficit**, defined as the nominal deficit minus interest payments on the public sector debt, be it domestic or external. The primary deficit is an indicator of the sustainability of the domestic debt and is often used as a proxy for the risk of default by the public sector. If the primary deficit indicates that the public debt situation may be unsustainable, conversely, a primary surplus indicates that the public sector is paying at least part of the interest on its debt. In principle, this implies that the public sector debt is sustainable.

From the point of view of fiscal policy, perhaps even more important than discriminating between the two types of deficit is making the distinction between **current and capital budgets**, where the latter includes all public investment, while the former excludes it. While there is an interaction between the two, as capital expenditure results in a subsequent depreciation and maintenance cost that falls under the current budget, nevertheless, the distinction lies at the heart of any growth-fostering fiscal policy. The experience of the rapidly growing Asian countries clearly demonstrates the importance of public investment to facilitate and lower the costs of private sector activity.

Almost all governments face a budget constraint, the only exceptions being those that find themselves at the early stages of a resource boom: Azerbaijan and Cape Verde can be taken as examples. The practical issue involved is how large the deficit should get before it undermines the government's economic and social goals. A few general rules can be identified in that regard.

First, the financing of deficits should be sustainable. The deficit represents additions to public debt. These additions should be consistent with a manageable debt service burden, so that public expenditure is not continuously re-allocated from current and capital outlays to interest coverage. As stated above, the primary deficit provides a guide to a sustainable debt service burden, but it does not offer a general rule. Let us assume that a government identifies the maximum value for the share of interest payments in GDP. If the actual share is found well below that maximum value, then more public debt can be accumulated safely, and the fiscal deficit is not constrained by public debt. However, if the current share lies above that maximum, the constraint is binding. Whether the constraint is binding or not also depends on the interest rate paid on government bonds and on the economy's growth rate. The former raises the debt service share, while the latter reduces it. Whether or not the deficit and therefore fiscal policy itself is constrained by debt considerations is contingent on conditions in each country.

As discussed in the Training Module on monetary policy, the government and the central bank should avoid using the interest rate in a manner that creates a debt service constraint. Particularly in Africa, but elsewhere as well, conditionalities associated with stabilisation and structural adjustment lending have resulted in extremely high nominal and real interest rates. Whatever the effect of these on the private sector – which is unlikely to be positive, anyway – high interest rates

on government bonds create a policy-induced fiscal constraint that crowds out public expenditure on poverty reduction and growth-inducing investment. Therefore, the cautionary rule according to which fiscal deficit should be consistent with sustainable debt service should be accompanied by the rule that governments and monetary authorities should not generate excessive debt service through administered interest rates.

Development assistance should also be assessed against the benchmark of sustainability. In several countries of the sub-Saharan region, and in some outside it, official development assistance makes a substantial contribution to government budgets. While aid is essential for reaching the MDG targets, it is typically programmed by the donor on an annual basis, and subject to fluctuations that the recipient cannot predict. At the limit, the donor or lender can unilaterally suspend aid – and this has indeed occurred in many cases. As a result, governments should avoid excessive dependence on official development assistance by putting in place a long-term plan to replace it with domestic revenue.

Second, deficits should be consistent with macroeconomic stability. The meaning of this term was discussed in detail at the start of this module, where it was stressed that the characteristics of macro stability will differ from one country to another. Here it can further be stressed that achieving macro stability should not be viewed as a negative policy that focuses on reduction of inflation, but as a positive, growth-targeted policy, and that fiscal deficits should be judged in terms of their contribution to the latter assessment of macro policy. In particular, the deficit limit should be a derivative of the goals of countercyclical stabilisation and the fostering of growth, if these are consistent with debt sustainability.

To complete the discussion of fiscal deficits it is necessary to consider the common argument – frequently used as a ‘trump card’ – that deficits generate inflation. Economic theory teaches that deficits as such do not provoke inflation. Inflation requires continuous increases in money supply in excess of the growth of aggregate supply. Thus, a fiscal deficit causes inflationary pressure only if it generates an excess supply of money (which is at the heart of the IMF model discussed above). In principle, a deficit can be financed in such a way as to have neutral impact on the money supply, through sales of government bonds to private buyers. However, if part of the deficit is ‘monetised’, through bond sales to the central bank, for example, this will create inflationary pressures only if the resulting increase in money supply exceeds the growth of output. Using the familiar quantity equation, the algebra of this relationship is as follows:

$$vM = Py \text{ (where 'v' is the velocity of money, which is constant)}$$

This can be differentiated to produce the familiar quantity theory rule according to which inflation results in increases in money supply above output growth:

$$p^* = m^* - y^* \text{ where each term is the percentage rate of change of the variable.}$$

Let the absolute amount of the fiscal deficit be ‘D’ and the proportion which is monetised be ‘ α ’ (greater than zero and less than one), so that $\alpha D = \Delta M$; the increase in money supply is equal to the amount of the deficit that is monetised. This can be substituted into the inflation expression, and the result multiplied by unity in the form of nominal output divided by itself (Py/Py). Since Py/M is the velocity of money, then:

$$p^* = [\alpha D/M] - y^* = \alpha [D/Py][Py/M] = \alpha v d$$

The deficit will be non-inflationary if:

$$y^* = \alpha vd, \text{ or } d = y^*/[\alpha v], \text{ and } \alpha = y^*/[vd]$$

Formally, this expression has three unknowns: the degree of monetisation, the size of the fiscal deficit, and the growth rate. The first two are policy variables, while the third is a policy target. The first two can be used to achieve the third. For example, if a deficit of three per cent of GDP were required to finance public investment intended to achieve a policy-targeted six per cent growth rate, and the velocity of money were four, the government would need to monetise no more than half the deficit. If the government would accept a six per cent rate of inflation, all the deficit could be monetised. Thus, the government has two policy instruments – namely, the size of the fiscal deficit and the method by which it is financed – to achieve two goals: [a higher] growth rate and [a controlled] inflation rate. This would be the approach of a pro-poor fiscal policy, treating fiscal deficits as a tool rather than as an affliction.

Modest deficits can be fully monetised if policy makers accept a modest rate of inflation. This is important for two reasons. First, most low-income countries have underdeveloped financial markets, with the market for public bonds limited primarily to an oligopolised commercial banking sector (frequently under the requirement that those banks hold a specified share of their assets in these bonds). Second, since in most countries government bonds represent asset holding that is almost without risk, selling bonds to commercial banks may discourage them from making productive (but riskier) loans to the private sector. Third, private buyers of government bonds will be the wealthy, so that the debt service on them will have a regressive effect on income distribution. Therefore, consistent with the government's inflation constraint (as explained above), monetisation can under certain conditions be seen as 'sound' fiscal financing.

4 CONCLUSION

The principal message of this Training Module is that fiscal policy should not be a continuous struggle against deficits and inflation, but a tool for poverty reduction in general, and for reaching the MDG targets specifically. The MDGs specify a timetable which, in the case of many countries, especially in the sub-Saharan region, cannot be met by growth performances achievable under restrictive stabilisation and structural adjustment programmes. But there is an alternative macroeconomic framework that would make achieving those targets feasible. The alternative is to treat developing economies as what they are – quantity-determined – not as what they are not – price-determined.

The price-determined framework can have important uses, more so when analysing economies in the long run. However, it is not a guide to effective fiscal policy. On the contrary, by implicitly assuming economies to be at full employment so that 'prices rule', that framework excludes the most important policy issues associated with growth and poverty reduction. Two of these have been analysed in detail in this module: 1) the technical basis for counter-cyclical interventions to avoid fluctuations in growth; and 3) raising the rate of growth through public investment, designed to crowd in its private counterpart.

ANNEX 1.1

DEFINITIONS OF THE PUBLIC SECTOR DEFICIT

Public sector deficits can be measured in different ways depending on the revenues and expenditures included in the calculation (i.e., the concept of ‘public sector’), and how each is calculated. This annex deals with the three common measures of public sector deficit: the nominal deficit (or public sector borrowing requirement, PSBR), the primary deficit, and the operational deficit.

NOMINAL DEFICIT (PSBR)

The PSBR measure was formalised by the IMF in the 1980s. It measures the difference between the expenditures of the central government and its revenues in a given period, or, alternatively, the change in the net debt of the non-financial public sector. The central government is defined as comprising all public sector agencies, including national and provincial units and semi-autonomous agencies, with the latter including social security funds and public enterprises.

The public budget constraint can be written as:

$$G = T + \Delta Mh + \Delta B + E\Delta R^* + \Delta C$$

where G is public expenditure, T is tax revenue, ΔMh and ΔB are the changes in the monetary base and in the domestic debt with the non-government sector (i.e., excluding government securities held by the central bank), E is the average nominal exchange rate, R^* is the international reserves, and C is the debt of the SOEs.

For the sake of simplicity, payment arrears and other non-conventional forms of public expenditure financing are excluded.

The nominal deficit of the central government (PSBR) is:

$$N = \text{PSBR} = G - T = \Delta Mh + \Delta B + E\Delta R^* + \Delta C$$

The PSBR is the variation of the net debt of the public sector (NDPS), where

$$\text{NDPS} = Mh + B + ER^* + C.$$

PRIMARY DEFICIT

The primary deficit (P) is the nominal deficit minus interest payments on the public sector debt:

$$P = N - iB$$

where ‘ i ’ is the nominal interest rate, $i = (1 + \pi)(1 + r) - 1$, ‘ π ’ is the rate of inflation, and ‘ r ’ is the real interest rate.

The primary deficit is an indicator of sustainability of the domestic debt and, for this reason, it is often used as a proxy for the risk of default by the public sector. If the primary deficit indicates that the public debt situation may be unsustainable, conversely, a primary surplus indicates that

the public sector is paying at least part of the interest on its debt. In principle, this implies that the public sector debt is sustainable.

OPERATIONAL DEFICIT

The operational deficit (O) is the nominal deficit minus that part of the interest paid by the government which corresponds to inflation:

$$O = N - \pi B$$

The rationale for the operational deficit is the following. If there is inflation, part of the nominal variation of the Domestic Public Debt (DPD) is merely due to an increase in the general price index, compensating the holders of securities for the devaluation of their capital. No deficit is implied (see the example below). Let us assume that the country's GDP is 100, and that economic growth is nil. The rate of inflation is zero, and the nominal and real interest rates are 10 per cent. The government's debt on 1 January is 9.1. Let us also assume that the tax revenues cover the government's non-financial expenditures.

Variable	1 Jan (t)
GDP	100
GDP growth	0
Inflation (π)	0
Nominal interest rate (i, %)	10
Real interest rate (r, %)	10
Domestic public debt (B)	9.1

On 31 December, when interest is due on public sector bonds, 0.91 monetary units must be financed. Since there are no tax revenues available (and monetisation is ruled out by assumption), the government must sell additional bonds to pay interest. Therefore, the primary deficit is nil, the nominal deficit is 0.91, and the DPD rises to 10.01:

Variable	31 Dec (t)
GDP	100
GDP growth	0
Inflation (π)	0
Nominal interest rate (i, %)	10
Real interest rate (r, %)	10
Domestic public debt (B)	10.01
Primary deficit (P)	0
Nominal deficit (N)	0.91

In the following year there is 100 per cent inflation. Therefore, GDP rises to 200 per cent and, if the real interest rate remains at 10 per cent, the nominal interest rate must rise to 120 per cent ($i = (1 + \pi)(1 + r) - 1 = (1 + 1)(1 + 0.1) - 1 = 1.2$). If the government's tax revenues remain equal to its non-financial expenditures ($P = 0$), then the DPD will grow by the amount of the interest due. In this case, this interest will be:

$$iB = [(1 + \pi)(1 + r) - 1] B = [(1 + 1)(1 + 0.1) - 1] (9.1) = 10.92$$

This is also the nominal deficit. Therefore, the DPD increases to $9.1 + 10.92 = 20.02$ during this year.

If we exclude the impact of inflation on the DPD, we can determine the operational deficit:

$$O = N - \pi B = 10.92 - (0.2) 9.1 = 0.91$$

This is the nominal deficit without the impact of inflation, or the nominal deficit when inflation is zero. The significance of the operational deficit can be explained as follows. Suppose that the government decides to eliminate the nominal deficit. In the example above, this would imply a fiscal effort of 11 per cent of GDP, which is bound to generate severe political tensions.

Yet, the nominal deficit is almost entirely due to inflation. What the economy needs, in this case, is not a lower nominal deficit (i.e., the public sector finances are not 'out of control'), but a reduced inflation rate. In this sense, excessive focus on PSBR reduction, in order to reduce inflationary pressures, can be profoundly misguided. It can generate unemployment, poverty and other social costs for no valid economic reason. In practice, reduction of the deficit will accelerate the repayment of the DPD (while its real value declines), which may or may not be warranted, and should be considered on its own merits, rather than in the guise of inflation control.

ANNEX 1.2

SUSTAINABILITY OF THE DOMESTIC PUBLIC DEBT

Domestic debt sustainability can be defined in various ways, and different values can be compatible with a 'sustainable' DPD. The simplest way to approach this problem is to aim for the stabilisation of the DPD at its prevailing level, and calculate the primary fiscal deficit that is compatible with this outcome (the debt-stabilising primary deficit). Other scenarios can be derived from this baseline. The debt-stabilising primary deficit can be calculated as follows. Let 'Y' be the GDP, 'M' the money supply, 'B' the domestic public debt stock, 'N' the nominal fiscal deficit, 'P' the primary deficit, 'i' the nominal interest rate, 'r' the real interest rate, 'y' the real GDP growth rate and 'π' the inflation rate.

The nominal deficit at the end of a period 't' includes the primary deficit and the interest on the accumulated debt. This deficit can be financed either by monetisation (so called *seigniorage*) or bond sales. Ignoring debt arrears, public enterprises and external debt, one can write:

$$N_t = P_t + iB_{t-1} = (M_t - M_{t-1}) + (B_t - B_{t-1})$$

$$\text{Since } i = (1 + \pi)(1 + r) - 1,$$

$$P_t + [(1 + \pi)(1 + r) - 1]B_{t-1} = (M_t - M_{t-1}) + (B_t - B_{t-1})$$

Simplifying and rearranging:

$$B_t = P_t + (1 + \pi)(1 + r)B_{t-1} - (M_t - M_{t-1})$$

To simplify notation, define:

$$b_t = B_t/Y_t, b_{t-1} = B_{t-1}/Y_{t-1}, p_t = P_t/Y_t, m_t = M_t/Y_t \text{ and } m_{t-1} = M_{t-1}/Y_{t-1}$$

One can then divide through by Y_t , where $Y_t = (1 + \pi)(1 + y)Y_{t-1}$, and subtract b_{t-1} from both sides:

$$b_t - b_{t-1} = p_t + \left[\frac{(1 + r)}{(1 + y)} - 1 \right] b_{t-1} - m_t + \left[\frac{1}{(1 + \pi)(1 + y)} \right] m_{t-1}$$

This equation implies that the growth of the domestic debt as a proportion of GDP depends on the initial size of the debt, the primary deficit, the GDP growth rate, the real interest rate, the rate of inflation and the degree of monetisation.

Suppose, for example, that the government seeks to keep the ratio of public debt to GDP constant, requiring a primary deficit appropriate to do this, i.e., p_t such that $b_t - b_{t-1} = 0$. Assuming that the real interest rate is 10 per cent per annum, the growth rate of real GDP is five per cent, the initial debt stock is 20 per cent of GDP, the ratio of money to GDP rises from seven to eight per cent during the year, and that inflation is 20 per cent (these were approximately the parameters for Zambia in 2004), then:

$$p_t = 0.08 - \left[\frac{1}{(1 + 0.2)(1 + 0.05)} \right] \times 0.07 - \left[\frac{(1 + 0.1)}{(1 + 0.05)} - 1 \right] \times 0.2$$

implying $p_t = 1.5$ (deficit/GDP ratio).

If the economic growth rate is only two per cent, the maximum primary deficit compatible with the stabilisation of the domestic public debt declines to 0.7 per cent of GDP; if the primary deficit exceeds 0.7 per cent of GDP, the DPD will increase. Alternatively, if the GDP growth rate is five per cent, but the real interest rate is zero, then the maximum primary deficit rises to 3.4 per cent of GDP.

Low interest rates and higher GDP growth can make a substantial difference for debt sustainability. As the DPD rises as a share of GDP, stabilisation becomes a more demanding exercise, requiring lower fiscal deficits. The difference between the current primary deficit and its debt-stabilising level indicates the scale of adjustment required to stabilise the DPD, which may take the form of expenditure cuts, tax increases or reductions in interest rates. Faster growth or a reduction in the debt stock through a debt-adjustment programme could also lead to the same result.

BOXES

BOX 1.2

Fiscal Collapse in Transition Countries

The economic collapse of the ex-Soviet Union in Europe and Central Asia was accompanied by a fiscal collapse. From a position of no deficits in the late 1980s, the cross-country average rose to over 11 per cent of GDP during 1992-1993. The difference between Central European and Baltic countries, on the one hand, and the former Soviet republics, on the other, was dramatic. During the years of exploding deficits, not one country in the former group had an average deficit of 10 per cent or more, while only three Soviet ex-republics – Azerbaijan, Kazakhstan and Turkmenistan – did not.

Especially for the former Soviet republics, a coherent fiscal policy, in the sense of using taxation and expenditure instruments to manage the economy, was impossible in the early 1990s. These were years during which fiscal systems were in the process of construction. Until tax and expenditure administration was established, purposeful implementation of policy could not be done. Thus, it makes little economic sense to refer to fiscal policy as 'loose' in the 1990s since the means by which policy could be implemented were weak. By the mid-1990s, deficits had been substantially reduced in all former republics, except for those whose deficits had not been large. Nonetheless, these were still not years of real fiscal implementation, but of continued fiscal construction and struggles to reduce unsustainable deficits. Fiscal tools were unusable for economic management. Expenditure reduction in most ex-Soviet countries was draconian in the extreme.

Throughout most of the 1990s, it would be a mistake to treat the governments of these countries as having firm control over their fiscal systems, particularly taxation. This loss of control was structural, not the result of mistakes in policy or lack of competence of civil servants. The new taxation systems, based on sales, income and company taxes, were rarely accompanied by adequate enforcement mechanisms, in part due to lack of experience with them, and to the low morale of woefully under-paid civil servants new to their tasks. Analyses of fiscal sustainability problems made by reference to government failings or yielding to special interests underestimate the systemic difficulties of fiscal policy during the transition process.

The non-sustainability of the fiscal position of these countries in the 1990s was inherent in the transition process, not the result of lack of government 'will' or 'commitment'. By the early 2000s, every transition government presided over an annual average deficit of less than five per cent of GDP except four, only one of which was a former Soviet republic (Kyrgyz Republic). Reductions in the fiscal deficits across countries over those 11 years provided strong and obvious evidence that the deficit levels were primarily a systemic problem of transition, which government policy could affect only to a limited degree.

Unacceptable human suffering lay behind these statistics on deficit reduction, for they were achieved in most of those countries through draconian real reductions in social expenditure. While narrowing the fiscal gap represented a necessary step towards macroeconomic stability, the result was an even more serious gap, namely, that seen in social provision – which has in turn been a major contributor to the most fundamental gap of all: that existing between the level of deprivation and the meeting of basic social needs. This deprivation gap is enormous in all the ex-Soviet countries, and unlikely to be substantially narrowed in the foreseeable future through market processes alone.

Given the size of deficits in the 1990s, fiscal austerity could not be avoided, though it must be recognised that inappropriate external advice played a role in the severity of the fiscal collapse. However, by the early 2000s, fiscal systems had been reconstructed, and the level and nature of deficits completely changed. It is essential that future deficit targets be derived from the goal of poverty reduction, because macroeconomic stability has already been achieved. This requires using fiscal policy actively as an instrument for promotion of growth.

For further discussion see Weeks, *et. al.* 2005, Chapters 1 & 2.

BOX 1.3

Active Fiscal Policy in Vietnam

During the period 1990-2005, Vietnam had one of the fastest growth rates of any country in the world. Unlike most of the countries in the Southeast Asia region, it suffered little from the Asian Financial Crisis. Central to this success was an active fiscal policy that emphasised public investment. Because of problems of non-comparability of data, the analysis in the table below begins in 1995. Following the standard analysis that treats private consumption and imports as induced variables, the sources of aggregate demand are government current expenditure, investment (public and private) and exports. The sum of *these* times the so-called multiplier yields aggregate national income.

Using this approach, it is possible to calculate the contribution of each element of aggregate demand to the growth of output over the 10 years of 1995-2004. Because of the specific features of the Vietnamese economy, it is not possible to differentiate between public and private investment according to the standard definitions. In the table, investment is separated between that specified in the public budget and 'other', with the latter including investment by public enterprises, companies that are joint ventures between foreign corporations and the government, and private companies by the usual definition. 'Public budget' investment was largely destined for infrastructure. Public investment – in the narrow sense of that specified in the budget – accounted for almost 10 per cent of the overall growth rate of 6.3 per cent, with public current expenditure slightly more. Thus, a fifth of total demand came from public expenditure narrowly-defined. In addition, a substantial portion of export growth was driven by public enterprises, and an even larger portion by joint ventures. Perhaps half of the 'other' investment derived from public enterprises and joint ventures.

Therefore, it would be accurate to say that Vietnam's impressive growth performance resulted in large part from the combination of an expansionary fiscal policy (i.e., a budget deficit) with a strong investment performance by public and semi-public enterprises.

Sources of Aggregate Demand in Vietnam, Period Average, 1995-2004

Category	Percentage	Growth per cent
Private consumption	induced	
Total investment	23.8	1.5
Public budget	9.8	.6
Other	14.0	.9
Public current expend	11.1	.7
Exports	68.3	4.3
Total	100.0	6.3

'Growth per cent' refers to the percentage point contribution to the aggregate growth rate.

The difference between the sum of the three shaded boxes and 'total' is inventory change.

Source: Update of Table II.4 in Weeks *et. al.* 2004.

BOX 1.4

Active and Passive Fiscal Policy in Indonesia

During the period 1972-1996, Indonesia had one of the fastest-growing economies in the world, with an average of over seven per cent per annum. This rate of growth was accompanied by substantial poverty reduction. An essential driver was public expenditure, especially in the first stages of the country's rapid growth. During the first decade of rapid growth, public investment made a contribution to growth equal to that of private investment, and government expenditure as a whole contributed almost 30 per cent of the overall increment in aggregate demand. When the Asian financial crisis hit the country, national income fell by over 20 per cent, and fiscal policy made no contribution to reducing this decline, for government expenditure contracted at almost the same rate as the economy as a whole (see Table below).

The rates of decline recorded for other countries in the region were considerably lower, particularly for the Republic of Korea and Malaysia. These countries applied counter-cyclical fiscal policies, kept real interest rates at a moderate level and regulated external capital flows. This suggests that the combination of a passive fiscal policy, reducing expenditure as GDP fell, and a monetary policy characterised by high interest rates, within the context of an open capital account, made the decline worse than what would have occurred had the fiscal policy been expansionary and the monetary policy accommodating.

**Indonesia: Percentage Point Contributions to Growth of Aggregate Demand,
Period Averages, 1972-1999**

Category	1972-1980	1980-1990	1990-1996	1996-1999
Investment	2.2	4.3	3.8	-9.9
private	1.1	3.9	3.3	-8.1
gov't	1.1	.4	.4	-1.7
Total gov't expend	2.2	1.2	1.2	-2.9
gov't cons	1.1	.7	.8	-1.1
exports	4.7	1.4	3.4	8.0
GDP growth	8.0	6.4	7.8	-3.0

Source: World Bank, *World Development Indicators 2001* (CD-rom).

See Box 1.3, Active Fiscal Policy in Vietnam, for the method of calculation.

BOX 1.5

Debt-constrained Fiscal Policy in Zambia

Public debt implies an expenditure obligation on governments. If the debt is large, interest rates are high, and the obligation is treated as taking priority over all other expenditures, then debt service can completely close the fiscal space for poverty programmes, as well as severely restrict the scope for an active fiscal policy. This problem has dominated the public finances of Zambia for at least three decades.

Zambia's external debt service as a share of export earnings during 1975-2004 exceeded the average of other sub-Saharan countries, except during the second half of the 1980s. As a share of GDP, external debt service – which averaged almost nine per cent of GDP for Zambia over 30 years – was double that recorded for the other countries of the region. A series of adjustment programmes beginning in the late 1980s did little to change this; the average for Zambia after 1990 was only marginally lower than that recorded in the years before. To put such a debt service to GDP ratio in perspective, during the Latin American debt crisis of the 1980s, only three of 18 countries had for a decade ratios above what Zambia averaged for three decades. In the first half of the 2000s, external debt service consumed one-quarter of public revenue.

Measured in per capita terms, the debt burden appears as even more onerous. Since debts must ultimately be repaid with exports, a decline in export prices raises the real value of debt. Considering the period 2000-2004, when per capita debt is adjusted for the terms of trade, the average for other sub-Saharan countries declines slightly, from US\$ 465 to US\$ 450, while that recorded for Zambia increases dramatically, from US\$ 730 to over US\$ 900. Instead of being slightly lower after 1990 than before – as is the case in current prices –, the per capita debt, adjusted for the terms of trade, actually increases, from US\$ 730 to US\$ 1030.

It might be thought that the various debt-reduction mechanisms opened up space for an active fiscal policy to pursue short- and long-term goals. Indeed, Zambia benefited from bilateral debt cancellation and HIPC relief. However, it would appear that net fiscal space actually declined, as a result of the reduction in external grants and stricter conditionality on the size of the nominal fiscal deficit. Zambia is a clear example of how the combination of a debt burden and external conditionalities tied to debt reduction can render fiscal policy no policy at all.

Source: Weeks, et. al. (2006).

BOX 1.6

Sound Fiscal Policy in South Africa?

When the post-apartheid government came to power in South Africa, it implemented an orthodox macroeconomic policy that stressed the reduction of the fiscal deficit. The stated purpose of this policy – called the Growth, Employment and Redistribution programme (GEAR) – was to achieve an average growth rate of 4.2 per cent for 1996-2000. But the actual growth rate recorded was only half of that, well below population growth, despite favourable external conditions. Indeed, South Africa had one of the slowest rates of growth of any major middle-income country except for those severely affected by the Asian and Russian financial crises.

The calculations in the GEAR document implicitly explain why growth performance was disappointing. The programme called for public current expenditure to be neutral in its demand effect and for a minor annual growth stimulus of only 0.5 percentage point from public investment. Net exports were programmed to have a negative demand impact of minus 0.2 percentage point. All of the demand stimulus for the 3.9 percentage points above the contribution of public investment would come from a putative increase in private investment. That increase in investment would be generated by the decline in real interest rates in response to a fall in the fiscal deficit, which in 1996 was five per cent of GDP. Indeed, the deficit was reduced, real interest rates fell, but private investment was only half its programmed value.

The GEAR was an example of unsuccessful stabilisation: it brought down the fiscal deficit, reduced inflation, but growth was disappointing. A larger budgeted public investment, financed by non-inflationary bond sales in South Africa's sophisticated financial market, could have achieved a 4.2 per cent growth rate.

Source: Weeks 1999.

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NOTES

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2. See McKinley 2003 and 2004.
3. 'Counter-cyclical' refers to policies that aim to keep actual GDP as close as possible to potential GDP by moving in the opposite direction of the overall economic cycle: stimulating demand when the economy is weakening, and dampening demand when the economy is strengthening.
4. Policy rules are predetermined policies that ignore changes in circumstances due to the economic cycle or to other shifts in the economic 'fundamentals'. Adherence to rules supposedly reduces distortions and facilitates market-based economic stabilisation in the long run. In contrast, policy discretion allows the government to decide its policy responses in the light of concrete problems and events, and to shift policies in response.
5. Crowding out is the process by which expansionary fiscal policy, financed through the sale of government securities, causes the real interest rate to rise and, therefore, private investment to fall.
6. Monetary policy is accommodating when, during a fiscal expansion, the central bank increases the supply of money in order to prevent real interest rates from rising. This means that the central bank is, in effect, printing money to finance the government deficit (monetisation).
7. FP is not the only or even the first model to look at the conditions for macroeconomic equilibrium in an open economy (for alternative models, see any textbook of international finance). However, for reasons of space, only FP will be reviewed in this module.
8. This is a very simplified presentation of this model. For a more sophisticated analysis, see Tarp (1993).
9. The post-Washington consensus cannot be discussed here for reasons of space; see, however, Fine, Lapavistas and Pincus (2001).

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