25 May 2006

This paper was commissioned by the Poverty Group of the United Nations Development Programme's Bureau for Development policy

Fiscal Space in Developing Countries

Concept Paper

J-F. Brun, G. Chambas, J-L. Combes, P. Dulbecco, A. Gastambide, S. Guérineau , S. Guillaumont and G. Rota Graziosi

Co-ordinating author: Gérard Chambas,
G.Chambas@u-clermont1.fr

Summary

Executive summary

Following the adoption of the Millennium Development Goals, the issue of use of fiscal space, in other words all methods of locating usable resources in order to finance public goods an services, has arisen once more, and is all the more acute. Such mobilisation must be compatible with long-term macroeconomic sustainability of the main macroeconomic balance factors and must be optimal (balancing out the marginal costs of the various components of fiscal space). Mobilisation of fiscal space must be done in the context of the fight against poverty.

Fiscal space has two related but distinct definitions:

- The first encompasses government revenues (tax and non-government revenue) and internal financial resources (domestic borrowing and seigniorage). This corresponds to fiscal space in the narrow sense (henceforth NFS).

- In a second definition, fiscal space is made up of external resources (grants, external borrowing) and also domestic resources that more effective public expenditure would free up. This second entity, combined with the narrow sense of fiscal space, forms fiscal space in the broad sense (henceforth BFS).

The analysis focuses on NFS (government revenues and domestic financial resources). However, in the last section, it is recognised that there are inter-relations between the various components of BFS, and analysis is performed of how fiscal space can fit into a framework of action against poverty.

Mobilisation of government revenues

Analysis of changes in actual government revenues (tax and non-government revenues) is the first step in the process of identifying, from comparisons between countries and between groups of countries, an under-exploited space in government revenues. This analysis also covers the volatility of public revenue in the country under scrutiny. Revenue volatility, which particularly affects the poorest countries, has a negative effect on space within public revenues.

An evaluation of the tax effort, which is an indicator of the impact of economic policies on the level of government revenues, enables the refinement of assessment of potential space in government revenues by identifying those elements of those revenues that are determined by structural factors (and over which the government can have little influence in the short term) and those influenced by economic policy. Positive tax effort (when economic policy determines a larger proportion of space in public revenue than structural factors do) may signal that revenue potential is fully mobilised, while negative tax effort indicates that there is an under-exploited space in revenue.

An approach using main tax revenues enables an assessment of governments' capacity to maintain space in their public revenue during tax transition. This involves assessing their capacity to make up for losses in tariff receipts through strengthening of internal taxation resources. In the context of a first-generation tax transition, this assessment focuses primarily on domestic indirect taxation, particularly VAT; it can also consider revenue from direct taxes (second-generation tax transition).

Tax reform must aim to raise revenue levels but it must also be economically neutral; it must also be carefully designed to achieve poverty reduction. Country-specific assessments of tax system reforms must be undertaken bearing these three aims in mind. Given the current consensus and lessons learnt from previous studies, country-level analysis of tax administration systems must assess the extent to which best practice is being applied. Studies of specific countries should shed light on critical issues that have been insufficiently addressed, such as the creation of institutions and economic policies that favour reform, the degree to which VAT is economically neutral, the effectiveness of measures aimed at taxing unofficial economic activity, and the possibility of taxing agricultural activity. A particular emphasis will be placed on general measures relating to the taxation environment, such as institutional and macroeconomic factors; these also affect the ability to mobilise financial resources.

Mobilisation of domestic financial resources

Money issue and borrowing are the two sources of domestic finance for a budget deficit. Governements' ability to use debt and currency creation can in theory be constrained by institutional factors. Debt might crowd out private investment, while seigniorage does not. It does, however, come with a significant inflationary risk. These two sources of financing must not go beyond certain limits, because of constraints pertaining to the sustainability of public finances and the search for an optimal level of seigniorage.

The conditions under which internal finance resources, and particular borrowed resources, can grow may be elicited by outlining the objectives relating to getting savings into banks and channelling these savings towards the Government.

In order to reduce obstacles to putting savings in banks, four kinds of action can be considered. 1) Extension of the range of financial services (creation of 'basic' bank accounts suitable for poor households; increasing competition in the banking industry with a view to improving financial products in order to keep hold of savings made by high-income households, and facilitating transfers from emigrant workers). 2) Gradual liberalisation of interest rates in order to guarantee positive remuneration for savings deposits. 3) Improvement in financial literacy of the poorest households. 4) Stronger regulation of the financial system (to respect regulations, introduce transparency in rules by which loans are granted, and so on) in order to develop a climate of trust in the formal banking system.

Improved channelling of financial savings towards the government could be supported by four measures: 1) reform of the public bond market (improvement in issuance procedures, standardisation of bonds, training of specialist intermediaries and indexation -if inflation is high- of bonds); 2) creation of regional financial markets; 3) devolution of budget responsibility to local authorities (channelling savings into the public sector, as supply of public services would be closer to local communities); 4) finally, improvement in budget practices in order to increase the public's trust in the Government.

Fiscal space in a global perspective

Broad fiscal space should have the ultimate aim to help fight poverty. Evaluating this contribution requires sound understanding of the interactions between the components of narrow fiscal space, and also the interactions between these components and the additional components contained in broad fiscal space.

A schematic representation of fiscal space casts light on the following major relationships:

- Seigniorage, external and internal borrowing, as well as grants and public arrears, have an effect on tax effort, which partially determines the level of government revenues.

- Poverty and economic growth have an impact on both tax effort and on the level of government revenues.

- Improved effectiveness of public expenditure improves the tax compliance, via improved supply of public goods and services, which has a positive effect on government revenues.

- Availability of currency, through grants and external borrowing, lessens the obstacles to external payments, facilitates the importation of goods and services and improves the supply of public goods and services.

- Quality of public expenditure is likely to contribute to extending fiscal space. Reinforced expenditure (in terms of quantity and quality) reinforces, in turn, the tax compliance and increases the country's attractiveness to international investors. A similar effect, promoting extension of fiscal space, can be expected following improvements to the tax administration system.

- Fiscal space is an important weapon in the fight against poverty. It has a twofold relationship with poverty. Thus, high levels of poverty, and also inequality, reduce fiscal space. Conversely, the various components of fiscal space are also instruments of redistribution and act to combat poverty.

- Fiscal space can be modified according to whether or not the method of financing public deficits has a stabilising effect on resources that create fiscal space: the 'finance' component of broad fiscal space can enable stabilisation, and therefore reinforcement, of fiscal space.

- The macroeconomic effect of a debt-based strategy, particularly in terms of growth, is heavily dependent on the initial level of debt (the lower the initial level of debt, the more likely it is that an effect that favours growth will occur). Such incitement to growth generally has a positive effect on poverty reduction: it also tends to improve the sustainability of public finances (it has a directly positive effect on government revenues, and also on the ratio of public debt).

- An excessive inflation tax hinders mobilisation of government revenues. Public arrears are always a factor that slows down mobilisation of these resources. By undermining mobilisation of government revenues, the inflation tax and public arrears prevent public finances from fully playing their full role in poverty reduction. Moreover, inflation due to excessive seigniorage negatively affects the poor.

- Resources can be freed up by decentralising management of public expenditure, which, in an optimal institutional framework, enables increased effectiveness of public expenditure.

- The redistribution effects produced by mobilisation of various components of fiscal space, particularly the government revenues component, are a complex and poorly understood phenomena. Further analyses of specific countries are necessary.

Chapter 1: General Introduction

Developing countries, particularly low-income countries, frequently fall into poverty traps (Azariadis and Stachurski, 2004). There are several explanations for persistent poverty. With an imperfect credit market, access to loans requires presenting the lender with collateral. By definition, poor people are not in a position to do so. Such a situation causes persistent poverty, and is inefficient, to the extent that some of the most profitable projects are not financed. Furthermore, low-income countries are characterised by very high levels of fertility, as reproduction yield is higher than savings yield. This can result in poverty traps insofar as low levels of development enable high growth in population, which itself hinders development. Poor people cannot save because they use all of their income to meet their consumption needs. Low levels of saving block the development process. There is also a threshold in the accumulation of capital: if the initial production level is lower than the critical threshold, the economy does not grow sufficiently and the poverty trap persists. For example, the low productivity of the traditional sector does not create sufficient demand for modern sector goods, which prevents the modern sector from covering its fixed costs. The low level of existing capital in areas such as human resources drastically reduces the profitability of investments and discourages private sector capital investment (Sachs et al. 2004). Finally, the presence of failing institutions associated with corruption can lead to a self-sustaining blockage of the development processes.

In the presence of poverty traps, strategies solely based on growth, or on the introduction of limited changes in policy, or in the socio-economic environment, generally prove ineffective at reducing poverty. This finding has led to large amounts of external aid being sought, as part of a 'big push' (Sachs *et ai.*, 2004). Adoption of the Millennium Development Goals (MDG) can be seen in this context. A large injection of aid, used effectively, is meant to enable economic growth to get off the ground. However, this policy has received various criticisms (World Bank, *Global Monitoring Report,* 2005; Easterly, 2005). On the one hand, the very existence of poverty traps is contested. On the other hand, the ineffectiveness of aid is emphasised (for example: no correlation between aid and investment; limited absorption capacity; ineffectiveness of aid in the absence of good policies; institutional weakness).

In addition to taking into account these criticisms, this strategy will require the mobilisation of far more resources than the level of government revenues traditionally mobilised. Over the last two decades, although significant programmes have been implemented, aimed at strengthening developing countries' own government revenues, and although real results have been achieved (Chambas et al. 2005), it must still be noted that adjusting public finances, mainly by controlling expenditure, has been the top priority. The direction taken by fiscal policy has enabled a reduction in the use of resources intended for budget deficit funding, but it has also resulted in a decline in the provision of public goods. Moreover, the question of the ineffectiveness of public expenditure has not been adequately addressed. Going in this direction has not prevented a large number of developing countries from entering into excessive debt: this has been one factor encouraging governments to seek palliative solutions for their excessive levels of debt (for example, HIPC debt reduction programmes) rather than mobilise additional internal resources.

The issue of mobilisation of all available resources in order to fund public expenditure arises with renewed urgency in the context of the internationally agreed development goals, including the MDGs: it is necessary to make use of all available resources within each country's 'fiscal space'. This must be done in a sustainable manner: in other words, it must be compatible with long-term sustainability of macroeconomic stability (Heller 2005). Moreover, recourse to various aspects of fiscal space must be optimised (marginal costs of various components of fiscal space must be equalised).

The central question, and the one to which the concept of fiscal space is attempting to respond, is whether it is possible, in the context of sustainable public finance stability, to mobilise additional resources in order to fund development, and particularly poverty reduction, which is at the heart of the Millennium Development Goals. Mobilisation of supplementary resources comes up against several obstacles:

- The first main restriction is public finance sustainability. In other words, can developing countries expand their fiscal space without compromising the public finance sustainability? This assumes that the government is in a position to mobilise adequate resources in order to preserve its future capacity to fund public expenditure programmes and service its own debts. Public finance stability must be ensured, taking into account the resources required to cover recurring costs attached to expenditure programmes funded using resources acquired by exploiting fiscal space.

- Because the correlation between poverty reduction and growth is so weak, the second restriction is twofold. First, is the mobilisation of supplementary resources compatible with the poverty reduction goal? In other words, is there a risk that the mobilisation of additional resources will worsen poverty and/or strengthen the poverty trap mechanism? Second, with respect to economic growth, without which it is difficult to reduce poverty on a long-term basis: can additional resources be mobilised for the government without causing economic distortions which have a serious impact on growth?

- There is a third, institutional, category of restriction[1]. This involves the multiple restrictions put in place by governments and individuals, which dictate interactions between these individuals (North 1990). These restrictions are partly formal, such as laws and regulations, and partly informal, such as behavioural norms, conventions, and self-imposed codes of conduct. One challenge posed by the concept of fiscal space is to form a coherent system, given these two sets of constraints, with a view to create an institutional environment that favours resource mobilisation. The combination of formal rules and informal standards partially determines the potential fiscal space. Moreover, policy constraints affect the effectiveness of fiscal space in that they define economic and fiscal rules. By taking into account institutional variability, we contribute to the construction of a typology of fiscal space.

---

[1] The issue of institutional determiners of fiscal space is addressed in Chapter 2. Chapter 3 suggests ways of assessing institutional seigniorage factors, as well as ways of analysing the impact of a financial system, and of changes to this system, on mobilising and directing financial savings to the Government. Chapter 4 addresses the role played by institutional variables in all aspects of fiscal space.

Fiscal space has two related but distinct definitions:

- The first encompasses government revenues (tax and non-tax revenue) and internal financial resources (domestic borrowing and seigniorage). This corresponds to fiscal space in the narrow sense (henceforth NFS).

- In a second definition, fiscal space is made up of external resources (grants, external borrowing) and also domestic resources that more effective public expenditure would free up. This second entity, combined with the narrow sense of fiscal space, forms fiscal space in the broad sense (henceforth BFS).

Some authors (e.g. Adam and O'Connell 1999) emphasise the severe distortions caused by public levies in developing countries, which in turn justifies heavier reliance on borrowing and/or grants from other countries (Gunning 2004). Similarly, the fact that public expenditure is ineffective opens the possibility of releasing further resources via more efficient public expenditure. However, as was emphasised at the Monterrey Conference, developing countries must still rely heavily on domestic resources, which are at the heart of broader fiscal space.

This analysis will first and foremost focus on fiscal space in the narrow sense, and therefore will concentrate mainly on the mobilisation of internal resources. However, as highlighted in chapter 4, the mobilisation of external financing and the savings obtained from greater effectiveness of public expenditure interact with the mobilisation of internal resources.

- Chapter 2 addresses the government revenues component of fiscal space.

- Chapter 3 relates to internal financing resources

- Chapter 4 deals with the interactions between the various components of fiscal space and the relationship between fiscal space and poverty reduction.

Chapter 2: Optimal mobilisation of government revenues: an essential component of fiscal space

Government revenues (tax and non-tax revenues), as opposed to borrowed resources , have the advantageous feature that they impose no further debt burden (either domestic or external); this means that these resources are to be favoured if there is a wish to keep public finances stable in the short term. However, revenue mobilisation incurs economic and social costs. As part of the quest to mobilise resources optimally, is it possible to increase revenue levels without causing unacceptable social problems (e.g. increasing poverty) and without increasing the economic distortions which discourage activity and undermine growth? This is a critical question for the development of fiscal space.

In order to answer this question, two complementary approaches would seem to be relevant:

- Firstly, an approach centred on overall government revenues, which enables the specific overall space generated by the mobilisation of these revenue to be evaluated;

- An approach centred on some essential tax categories and aiming to evaluate the potential for mobilisation of specific tax resources. This analysis, when performed on domestic government revenues (particularly indirect government revenues such as VAT and excise duties) provides a way of assessing a country's -or a group of countries'- capacity to ensure their own tax transition or, in other words, to maintain an appropriate level of global revenues in a context of falling tariff revenues.

1. Overall government revenues in developing countries: an assessment

For a particular country, this involves assessing whether there is any unexploited space in the government revenues, by examining changes in its (observed) available government revenues. However, such an analysis does not assess the country's government revenues mobilisation policy, as the actual level of government revenues is partly determined by structural factors: therefore a second step is required, and we rely on the concept of tax effort in order to assess to what extent a more active government revenues mobilisation policy would generate additional government revenues.

## 1.1   Level and volatility of overall government revenues

Two main characteristics of overall government revenues are examined in turn: overall level, and degree of volatility, both of which determine a country's ability to cover its public expenditure in the long term.

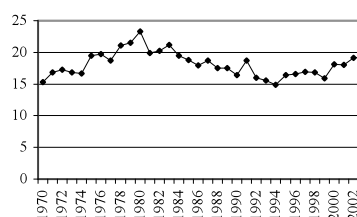### 1.1-1   Changes in overall government revenues

In order to make reliable comparisons between different moments in time or between groups of countries, the rate of government revenues as a proportion of gross domestic product is used as an indicator of government revenues. This concept of government revenues covers all tax and non-tax revenues received by central government and local authorities; social security contributions are also included. Comparisons are made between groups of countries within various geographical areas (Asia, Latin America, Africa and the Middle East/North Africa). Comparisons are also made between groups of countries with similar levels of development: less developed countries (LDCs), low-income countries (LICs), and middle-income countries (MICs).

For a particular country, analysis of changes in government revenues as a proportion of national product over a long period of time enables identification of areas of unexploited revenue or, alternatively, areas that are fully exploited. For example, in the case of Niger (graph 2-1), in the mid-1980s it can be observed that mobilisation of fiscal resources reduced, and therefore revenue potential was under-exploited. Conversely, at the end of the 1990s, Senegal (graph 2-2) managed to put an end to a long period of continuous erosion of its government revenues. This change has proved to be sustainable. The current level of government revenues ratio in Senegal, compared to the African average, lends credence to the hypothesis that it is exploiting space in its government revenues effectively.

<div style="display:flex">

Graph 2-1 **Evolution of the rate of government revenues in Niger (1970-2003)**
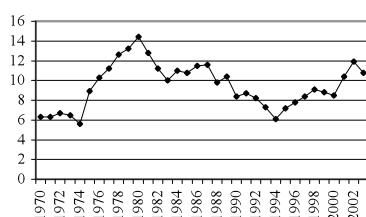
Graph 2-2 Evolution of the rate of government revenues in Senegal (1970-2003)

</div>

Source: graphs extracted from Chambas 2005.

Table 2-1:   **Level of overall government revenues : changes and international comparisons**

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	21.3 (82)	21.4 (83)	20.8 (85)	20.6 (88)	20.8 (94)
Sub-Saharan Africa	20.8 (43)	20.6 (44)	19.8 (45)	19.7 (45)	20.1 (46)
Latin America	20.3 (17)	21.0 (17)	20.7 (16)	21.4 (16)	21.1 (18)
Asia	19.3 (11)	22.1 (10)	20.8 (12)	19.1 (15)	18.5 (17)
Middle East/ North Africa	29.1 (11)	26.1 (12)	25.9 (12)	28.3 (12)	28.0 (13)
Less developed countries (LDCs)	18,3 (37)	17,6 (38)	16,7 (36)	17,0 (39)	17,1 (39)
Low-income Countries LICs)	18.7 (40)	17.5 (42)	17.0 (43)	16.9 (45)	17.8 (49)
Medium-income countries	23.8 (42)	25.3 (41)	24.8 (42)	24.9 (43)	24.3 (45)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: GFS (International Monetary Fund), national data; authors' calculations.

Comparisons of government revenues ratios, particularly comparisons in relation to groups of countries with characteristics that are closely related to those of the analysed countries can also be used to identify potential untapped resources. In certain cases, comparisons can also be made between two comparable countries.

According to table 2-1, levels of government revenues in Sub-Saharan Africa, Latin America and Asia are similar[2], and they are stable over time at around 20% of the GDP.
These levels are lower for the poorest groups of countries (LICs and MICs). On average, for the various groups of countries, government revenues ratioshave been very stable since the early 1980s. For countries grouped using a geographical criterion, table 2-1 does not identify unexploited space in government revenues, because of the stability and similar levels of government revenues. The lower levels recorded for the poorest countries (LDCs and LICs) should not lead to conclude that there is under-exploited space within government revenues, because resource levels can be determined by structural factors that are independent from government revenues mobilisation policies (see below, §1.2).

---

[2] Wilcoxon's non-parametric test, which enables comparison of means, does not invalidate this proposition.

1.1-2   Volatility in public government revenues and fiscal space

The poorest countries, particularly those in Africa whose economies are highly dependent on primary agricultural or mining products, tend to have rather unstable economies, which in turn causes volatility in the basis of taxation and therefore in overall government revenues. Volatility of government revenues in countries that depend on primary products can also be exacerbated by various characteristics of the tax system; for example, the tax system may have a major effect on only a small number of businesses. Volatility in government revenues is also exacerbated by the legal status of various tax bases. The same is the case for some consumption taxes: in many countries, for social reasons, basic goods with stable consumption are often exempt from consumption taxes (usually VAT). Taxes are therefore levies on the most unstable portion of the consumption base.

Volatility in rates of government revenues was assessed[3] (Table 2-2) for the various groups of countries described above.

Because of the relative position of primary products in the economies of African countries, volatility in government revenues ratios in these countries is significantly higher than that observed in other countries, with the exception of countries in the Middle East and North Africa. The volatility of government revenues ratios in LDCs is also more marked than that of all developing countries. Middle-income countries experience less volatility than that observed in low-income countries. The economy of middle-income countries is probably more diversified and therefore less vulnerable to fluctuations in primary products. It is also possible that a higher level of development increases the ability of government to stabilise government revenues ratios.

---

[3]Volatility is defined as a series of deviations above and below a trend. This volatility must not be likened to a risk, because it can, to a certain extent, be anticipated. The relevant concept is therefore considered to be volatility rather than risk, because public expenditure can undergo a ratchet effect (asymmetrical reaction of expenditure in response to a change in revenue levels) even if fluctuations in government revenues government revenues are fully anticipated. The main technical difficulty encountered when measuring volatility lies in defining the trend. The measures used enable simultaneous tracking of deterministic trends, polynomial time functions, and stochastic trends that are characterised by the presence of a unit root.

If there is a deterministic trend, any deviation from the trend is of a transient nature. In the event that rates of taxation only suffer from a single impact at a moment in time, this does not influence the trend. Consequently, rates of taxation eventually return to prevailing levels according to the trend.

If there is a stochastic trend, deviations from the trend are permanent. In the event that rates of taxation only suffer from a single impact at a moment in time, this does influence the trend. As a result, in this case, rates of taxation do not return to their original levels.

The following equation, estimated for each country and for each of the sub-periods, enables both types of trend (mixed trend) to be taken into account.

$$p_t = a + b\,t + c\,t^2 + d\,p_{t-1} + \varepsilon_t$$

p_t represents the rate of taxation at moment t. A unit coefficient value in front of the delayed taxation rate (d=1) indicates a stochastic trend. The level of volatility is the arithmetical mean, over the period considered, of the squares of the estimated remainder ε_t.

Table 2-2:   **Volatility of rates of overall government revenues ratios: changes and international comparisons**

Units: See note below

	1970-1980	**1980-1990**	**1990-1998**
Developing countries	8.2	7.9	6.8
Sub-Saharan Africa	10.4	9.5	8.2
Latin America	5.7	8.0	5.1
Asia	4.9	4.9	4.0
Middle East/ North Africa	14.0	8.0	17.8
Less developed countries (LDCs)	9.5	9.4	8.3
Low-income countries (LICs)	9.3	9.0	8.3
Medium-income countries	7.0	6.9	5.2

Sources: authors' calculations on the basis of GFS (International Monetary Fund) and national data.

With the exception of Middle Eastern and North African countries, a reduction in volatility of government revenues can be observed. This could be explained by a decrease in the relative amount of revenue from foreign trade taxes[4] (elimination of export taxes, tariff disarmament). This phenomenon could also be a result of some sluggishness in the prices of primary products over the last few years.

High levels of government revenues volatility introduce a risk, which is a source of vulnerability (Gollier and Pratt, 1996) and this clearly tends to reduce a country's capacity to adequately finance public expenditure[5].

---

[4]See table 2-6.

[5] Volatility of public resources has negative social consequences; this is because these countries suffer from loan restrictions on the international markets or access restrictions to donations. This then leads to volatility of public expenditure, which is sub-optimal, as well-being depends not only on levels of public expenditure but also on its being properly implemented.

There is significant literature on the Dutch disease, which has shown that high levels of volatility in government revenues following booms in export income has mostly negative effects on budget balance and long-term growth (Combes and Saadi-Sedik, 2006 ; Collier and Gunning, 1999). Furthermore, at a time when implementing the Millennium Development Goals requires stable government revenues levels in order to meet a large number of regular financial obligations, volatility of government revenues levels is a significant handicap in realising these goals. Volatility of government revenues (Bleaney et al., 1995) must be taken into account in the fiscal policy if the negative consequences of this volatility are to be overcome. On the one hand, it is important to mobilise revenues that are maximally invulnerable to the economic situation. This involves for example extending the VAT base to the least unstable consumption goods. On the other hand, as this volatility appears to be a partly inevitable phenomenon, which also enables countercyclical taxation, it would be advisable to rationalise the cyclical management of public expenditure, in particular by avoiding the habit of excessively increasing expenditure in times of boom and generating a "Dutch disease". Putting aside reserves of oil and mining income for the benefit of future generations should certainly be developed, but comes up against significant institutional obstacles (Alesina and Perotti, 1995).

For each country or group of countries, it is therefore advisable to evaluate the level of volatility in government revenues, determine the underlying factors behind it, and then identify means of alleviating this volatility (more stable tax bases that are less susceptible to economic trends).

1.2 Space in government revenues: assessment on the basis of tax effort

Observed levels of government revenues [6] depend on widely differing factors: some of these, structural factors, which cannot be influenced by economic policy in the short term, determine tax potential (tax paying ability), while all elements of economic policy determine levels of tax effort by modifying the level of government revenues.

Any given level of available taxation may correspond to radically different solutions involving exploitation of fiscal space.

- In a first, hypothetical case, structural factors determine a tax potential that is greater than the level of available government revenues; there is therefore a negative tax effort situation, in which economic policy is responsible for fiscal demobilisation. One might think that a more favourable economic policy could thus easily enable the mobilisation of additional revenues.

- In a second and equally theoretical case, structural factors determine a tax potential that is lower than the actual level of taxation, and the amount of observed resources is largely attributable to an economic policy that favours government revenues mobilisation. It seems possible that any economic policy adopted with a view to encouraging mobilisation of government revenues lead to exacerbation of the economic distortions caused by the tax system and to unwanted social effects. In such a situation, despite the fact that government revenues are at similar levels to the first case, there is nonetheless no space made up of under-exploited resources.

---

[6] This concerns observed taxation as opposed to levels of taxation calculated in relation to structural factors which correspond to the estimated tax paying ability (tax potential).

Just as tax potential (in other words, the impact of structural factors) can only be measured using econometric estimations that apply to all developing countries (see table 2-3 and box for an explanation of this method), levels of revenues mobilisation (or tax effort) are measured in relation to the average of all the countries' economic policies. It is therefore a relative concept.

Table 2-3: **Econometric equation determining the tax potential of developing countries**

Independent variables	Coefficients	t-Student	P-value
Constant	4.01	1.00	0.31
Importation Ratio M/GDP	3.85	7.97	0.00
Base-year product per capita	0.95	2.10	0.04
Mining and petrol exports as a proportion of total exports	0.03	3.12	0.00
Agricultural/GDP added value	-0.16	5.73	0.00
$R^2 = 0.33$			

Table 2-4: **Changes in levels of tax effort - international comparisons**

Units: percentage of the GDP

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Sub-Saharan Africa	-1.1	1.1	2.3	0.6	-1.0
Latin America	-1.5	-2.1	-1.8	-3.7	-2.7
Asia	-2.0	-1.3	-0.9	-1.6	-2.3
Middle East/ North Africa	10.3	6.5	9.5	0.9	-1.3
Less developed countries (LDCs)	-1.8	-0.5	-1.5	-0.7	-3.5
Low-income countries (LICs)	-1.6	-0.2	1.4	-0.2	-1.9
Medium-income countries	**0.8**	0.4	0.2	-1.8	-0.8

The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: authors' calculations.

Measurements of tax effort enable a first-level assessment of revenues that could be mobilised, on the basis of observed (effective) levels of revenues. A positive tax effort supports the conclusion that there are difficulties in mobilising additional revenues; on the other hand, negative tax effort indicates that there is an under-exploited area of revenues.

Table 2-4 gives an assessment of the average effort to find fiscal space made by the previously described groups of countries. This table shows that efforts to find fiscal space have declined in Sub-Saharan Africa. In 1990-1994, economic policy measures were implemented, and they enabled mobilisation to be improved by 2.3 GDP points above the tax potential, which indicates that mobilisation of tax potential was effective. Since 2000-2003, levels of mobilisation have declined, with a negative tax effort of one GDP point. Latin American and Asian countries generally have constantly negative tax effort levels; no significant change can be shown for either group of countries.

During the last observed period (2000-2003), the impact of economic policy on government revenues mobilisation became very negative for LDCs and slightly less so for low-income countries. Tax effort on the part of medium income countries is much more stable, and close to zero, and the effectiveness of their economic policy in terms of government revenues mobilisation is therefore close to the average. Results in table 2-4 therefore show, for the most recent period, a lower level of mobilisation of tax potential, particularly for LDCs, low income countries and also Asian and Latin American countries; for these countries, it is therefore recognised that there is an under-exploited government revenues space.

The analysis method is based on evaluation of tax effort, and is usable for specific countries and should form a guideline for countries to be studied. Table 2-5 assesses tax effort for a diverse selection of countries. Results for the period 2000-2003 show that there are areas of under-exploited revenues in Madagascar, Thailand and, to a lesser extent, Venezuela, while Morocco and Senegal have implemented economic policies that have enabled virtually all their government revenues to be exploited.

Table 2-5: **Tax effort and potential of a selection of countries**

Units: percentage of GDP

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Tax effort:					
Madagascar	1.0	1.6	-3.6	-3.8	-3.8
Morocco	-2.7	-2.9	0.4	0.0	-0.6
Senegal	1.5	1.1	-0.9	-1.1	-0.1
Thailand	0.8	0.4	0.7	-1.8	-3.8
Venezuela	4.7	-1.4	-4.2	-4.3	-1.8
Tax potential:					
Madagascar	12.5	11.3	13.6	13.6	13.7
Morocco	24.5	24.0	24.3	24.6	25.3
Senegal	19.3	17.0	17.0	18.0	18.4
Thailand	14.1	15.4	18.3	19.6	20.6
Venezuela	23.6	23.1	24.4	23.3	22.7

The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and a four-year period (2000-2003).
Sources: IFC (International Monetary Fund), national data, calculation by the authors.

Box 2-1 Tax effort, an indicator that there is space in government revenues: methods of assessment

Observed levels of government revenues can be divided into two components: on the one hand, a structural revenues level or tax potential, which depends on structural factors that are exogenous to economic policy and on the other hand, tax effort, which is determined by the revenue mobilisation policy. In other words, the tax potential of a particular country can be defined as the normal level of taxation achieved, taking account of the country's structural characteristics. The difference between the observed ratio of revenue and this tax potential is therefore attributed to decisions made by the political authorities, and can therefore be considered as a measure of tax effort.

The tax base is determined by a set of structural factors[7]. Among these variables is the level of development, which can be measured using three variables: gross domestic product per capita, income sector of origin (calculated using the proportion of agricultural added value) and the degree to which the economy is monetarised – this is measured using the ratio between aggregate M2 and GDP (e.g. Stotsky and WoldeMariam, 1997). It is in fact possible to assume that the greater a country's level of development, the greater its ability to raise revenues. Several explanations can be put forth for this. On the demand side, an increase in the level of development leads to a rise in and a diversification of the demand for public goods, which may reduce tax payers' resistance to paying tax. On the supply side, a rise in the level of development certainly increases the tax base. Moreover, if there is an increase in the level of development, there is most likely an accompanying increase in administrative capacity, particularly in the capacity to raise taxes, which is mainly due to economies of scale in tax administration and a better environment (high-quality infrastructure, better-qualified administration staff, and a better level of education across the population).

The tax base is also positively influenced by the level of trade openness. Indeed, international trade transactions are easier to tax than domestic income or consumption. In some countries, trade openness has still a greater effect on tax potential due to a higher proportion of mining or petrol products in total exports, because this category of exports can result in substantial revenues in the form of taxes or licensing.

The method whereby tax effort is calculated consists of estimating (Table 2-3) an equation that explains taxations rates as a function of the variables presented above, on data drawn from a large sample of countries over a long period of time (data from a panel of 85 countries over the period 1970-2003). The estimation uses on panel data analysis methods (random effects by country represent unobserved yet constant heterogeneity over time).

The residual of the equation, which can be calculated for a specific country or group of countries, then enables measurement of tax effort. Formally, if p represents the ratio of government revenues, $\hat{p}$ the structural ratio of government revenues and $\hat{\varepsilon}$ the tax effort, we can therefore write: $p = \hat{p} + \hat{\varepsilon}$.

By definition, if the mean of the residual ($\hat{\varepsilon}$) for the whole sample is null, tax effort must be interpreted relatively. The reference value consists of average behaviour in the whole panel of countries and years. Therefore, for a given country, a negative remainder signifies that the country considered has a tax effort that is lower than the norm, and vice versa when the remainder is positive. Finally, if the residual is null, the country's tax effort conforms to the sample average: a situation in which there is no tax effort therefore indicates, not that the tax policy is defective but that government revenues mobilisation policy is as effective as the panel average.

Approaches on the basis of analysis of changes in overall government revenues, or overall effort, enable estimation of whether or not there is under-exploitation of resources in a given situation. This estimation is all the more effective for being corroborated using analysis against the main tax categories: particularly, the capacity of these governments to maintain space in their government revenues as income from tariffs revenues falls.

---

[7] We have not considered poverty or inequality as structural factors of government revenues, because we consider them to be largely dependent on economic policies. Furthermore, the lack of annual statistics would have introduced serious limitations on the evaluation of the tax potential.

2. Space in revenue and tax transition

2.1 Tax transition in developing countries

A reduced dependency of government revenues on foreign trade taxes (Berg and Krueger, 2003) can be observed for all developing countries and for each of the previously mentioned groups of countries (Table 2-6). African countries follow this general trend. Nevertheless, tax contribution on foreign trade remains greater in Africa and the LDCs. In 2001-2003 these taxes still formed 22.8% of government revenues in Africa, compared to approximately 10% in other developing countries.

Table 2-6:   **Taxes on international trade as a proportion of overall government revenues: changes and international comparisons**

Units: percentage of overall government revenues

	1980-1984	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2003**
Developing countries	27.9 (94)	26.8 (98)	25.1 (99)	20.1 (91)	16.2 (89)
Sub-Saharan Africa	33.6 (41)	33.4 (43)	30.3 (43)	26.8 (42)	22.8 (45)
Latin America	23.5 (24)	22.0 (27)	21.6 (24)	16.8 (18)	10.8 (17)
Asia	28.2 (19)	27.1 (18)	22.3 (19)	16.5 (18)	11.7 (17)
Middle East/ North Africa	13.7 (10)	12.7 (10)	19.0 (13)	14.0 (13)	9.7 (10)
Less developed countries (LDCs)	35.7 (37)	35.7 (38)	30.8 (37)	27.5 (36)	23.5 (37)
Low-income countries (LICs)	32.8 (44)	31.8 (45)	27.5 (46)	23.0 (45)	18.9 (47)
Medium-income countries	23.6 (50)	22.5 (53)	22.9 (53)	17.1 (46)	12.9 (42)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: GFS (International Monetary Fund), national data; authors' calculations.

Tables 2-6, 2-7 and 2-8 show changes in the structure of government revenues collected through the relative contributions of trade taxes, internal indirect taxation (VAT and excise duties) and direct taxation, respectively. Between 1980 and 2003 a remarkable decrease in the contribution from taxes on foreign trade, an increase in the contribution from direct taxation and above all a high increase in internal indirect taxation can be noted. This change in the structure of government revenues brings to light a "tax transition" phenomenon,

characterised by a decrease in tariff revenues and an increase in internal taxation revenues. This should result in fewer fiscal distorsions (cf. § 2.1-2 in this chapter).

2.1-1   Loss of tariff revenue

Traditionally, the level of a developing country's government revenues was largely dependent on taxes on foreign trade (tariffs); a particularly strong dependence could be observed in African countries. Since the 1990s, developing countries, and more recently African countries, have undertaken trade liberalisation policies. These policies, which have become widespread, have resulted in the removal of almost all of the quantitative restrictions as well as in a generalised decrease in tariffs. Despite the impact of various factors, especially in the first stages of the liberalisation policy (conversion of quantitative restriction measures into tariffs, the favourable reaction of the base to the reduction in the raised taxation rate), which were quite favourable to the mobilisation of additional tariff revenues, tariff disarmament has generally resulted in significant losses of tariff revenues.

Over the next few years, additional losses in tariff revenues will occur, because of the strengthening of trade liberalisation. The creation of regional integration zones and the signing of economic partnership agreements, particularly with the European Union, which affect a large number of developing countries, will reinforce this trend of declining tariff revenues.

2.1-2   Tax transition policies

Following evaluation of the effect of liberalisation policies on the government revenues of developing countries, several works (references below) have attempted to assess the extent to which governments are able to stabilise their overall government revenues by substituting internal taxation resources for tariff revenues. This substitution and compensation process should facilitate tax transition in these countries and therefore also facilitate the preservation of the 'government revenues' component of their fiscal space.

After taking into account the major obstacles affecting direct taxation in developing countries, stabilisation of overall resources can most often be achieved through increasing domestic indirect government revenue, particularly from VAT. The results obtained through tax transition policies do seem, however, to have been mixed[8]: Recent research carried out by Baunsgaard and Keen (2005) on a large sample group of countries tends to show that the poorest developing countries do not manage to fully compensate for the tariff revenue losses

_____

[8] Khattry and Rao (2002) conclude, from a sample of 80 developing and developed countries over the period 1970-1998, that liberalisation had a negative effect on tax revenues. Conversely, Ghura (1998) shows, using a sample of 39 countries in sub-Saharan Africa (SSA) over the period 1985-1996, that the general level of openness in the economy (imports and exports as a proportion of GDP), which is an indicator of commercial liberalisation, has a favourable effect on the ratio of total tax revenues to GDP. This positive correlation with the level of commercial openness is confirmed using a sample of 22 SSA countries (period 1980-1996) by Adam et al. 2001, only for countries in the Franc zone. The work carried out by Agbeyegbe et al. (2004), carried out on the same sample of countries for the same period, does not show that trade liberalisation, as measured by levels of commercial openness and by tariff revenues as a proportion of imports, has any effect on total tax revenues.
To our knowledge, only the work (cited above) of Agbeyegbe et al. (2004) specifically researches how commercial liberalisation influences domestic tax revenues: this work was limited to SSA countries in the period 1980-1996, and demonstrates a positive correlation with direct tax revenues, but no significant relation with indirect domestic tax revenues, which nevertheless play a central role in tax transition.

resulting from tariff liberalisation. The poorer the country, the more partial this compensation is.

The issue that arises here is to assess whether it is possible for a specific country confronted with a decrease in its tariff revenues to preserve or indeed increase the level of overall revenues. In terms that are closer to the problem of fiscal space, are the countries capable of preserving the government revenues element of their fiscal space in a context of trade liberalisation? In order to answer this question, it is possible to complete the global analysis using an approach that focuses successively on the most significant tax categories. It is therefore a matter of assessing whether the primary taxes used to carry out the tax transition, particularly VAT, and to a lesser degree the other direct taxes, present under-exploited revenue potential which might be available for mobilisation.

Emran and Stiglitz (2005) criticise the very foundations of tax transition policies. They conclude that tax transition is inefficient because VAT systems tend to be very distortionary, particularly in the informal sector. This stance is particularly important, as it re-opens the debate on tax transition policy and on the need to put in place, instead of taxes that cause serious economic distorsions, a tax system that is more economically neutral (notably VAT). However, when considering the impact of an extensive informal sector on the economic neutrality of VAT, it is useful to take into consideration the effectiveness of current tax techniques, and particularly those relating to VAT, in mobilising tax contributions from informal activities (Araujo, Chambas, 2005) and thus at least partly avoiding one source of taxation distortion. Taking into account this criticism of VAT neutrality will enable the degree to which VAT is neutral to be assessed in country case studies.

2.2 Evaluation of VAT revenue within a context of tax transition

For each country experiencing falling tariff revenues, the question arises of whether it can maintain space in its government revenues. Most often, this requires an assessment of the role of VAT, better use of space in VAT revenue and therefore mobilisation of additional VAT revenue. This analysis can be undertaken by examining the overall contribution of internal indirect taxation revenues, in particular VAT, of the country under scrutiny compared to other developing countries.

Table 2-7: **Internal indirect taxation as a proportion of overall government revenues: changes and international comparisons**

Units: percentage of overall government revenues

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	22.1 (93)	25.0 (96)	32.7 (97)	34.5 (91)	35.2 (88)
Sub-Saharan Africa	21.8 (40)	23.3 (42)	38.8 (43)	35.9 (45)	36.7 (45)
Latin America	21.3 (25)	26.9 (27)	28.5 (23)	35.8 (18)	36.0 (17)
Asia	25.8 (18)	26.4 (17)	26.1 (18)	29.1 (15)	30.9 (16)
Middle East/ North Africa	14.5 (10)	19.3 (10)	27.1 (13)	25.2 (13)	27.9 (10)
Less developed countries (LDCs)	24.5 (37)	26.3 (37)	34.7 (37)	34.2 (37)	35.4 (37)
Low-income countries	24.4 (44)	25.9 (45)	34.0 (47)	35.8 (46)	37.3 (46)
Medium-income countries	20.1 (49)	24.2 (51)	31.4 (50)	33.2 (45)	32.7 (42)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: GFS (International Monetary Fund), national data; authors' calculations.

The relative contribution of internal indirect taxation (Table 2-7) has increased for all developing countries and for each group of countries. This increase is mainly due to VAT. In order to appreciate the results of more efficient implementation of VAT than simple changes in VAT rates in countries being studied, it is useful to assess revenue effectiveness of VAT by using the effectiveness coefficients defined in Ebrill et al. (2001).

These efficiency coefficients measure the VAT revenues obtained at a certain VAT point, and the revenues are assessed in relation to the GDP of the country concerned. For countries being studied, this method will allow an evaluation of revenue VAT effectiveness, independently of the rate of VAT applied, and, possibly, to prove the existence of an unexploited space in revenues (which will be the case if the effectiveness coefficient is low or falling). Similarly, by comparing the efficiency indicators of the country in question with the indicators of countries or groups of countries with similar characteristics, we can also detect under-exploited revenue space (in the case of a relatively low effectiveness coefficient).

Obviously, countries compared in this way should be at similar levels of development, as revenue VAT efficiency is partly determined by the level of development and economic characteristics (e.g. the extent of subsistence farming, consumption structure, degree of commercial openness). Moreover, the effectiveness coefficient certainly partly depends on VAT rates.

2.3   Space in direct revenue and tax transition

For all developing countries, direct taxes (basically taxes on household income and on company profits) make up around a quarter of total revenue (Table 2-8). The relative contribution of direct taxes as a proportion of overall government revenues is on average lower in Sub-Saharan Africa than in Asia, and especially than Latin America. For less-developed countries (within and outside Africa), the proportion of government revenues made up of direct taxation is stable.

Particularly in the poorest countries, significant obstacles stand in the way of large increases in contributions from direct taxation revenues. Because it is so visible, direct taxation is strongly resisted by influential groups: because of this, entire categories of income and assets (non-salary income, urban property assets) largely escape direct taxation. Additionally, it is often more difficult to implement direct taxation than indirect taxation, which is generally collected by a small number of economic operators, whereas the procedures for tax collection at source are not applicable to the entire direct taxation base (professional incomes, property incomes, etc.).

Because of these restrictions, and despite the increase in direct taxation over the last few years, such taxation cannot be considered as a major instrument of tax transition in the short term (Chambas et al., 2005). Additional resources can be mobilised through improvements in domestic indirect taxation, particularly VAT; however, in many countries this will not be sufficient to ensure stability and sustainability in public finances. It is therefore useful to look at 'second generation' tax transition, which will strengthen direct taxation.

Table 2-8: **Direct taxation as a proportion of overall government revenues : changes and international comparisons**

Units: percentage of overall government revenues

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	21.3 (93)	23.8 (96)	26.0 (99)	25.5 (93)	25.1 (89)
Sub-Saharan Africa	19.8 (40)	20.7 (42)	24.1 (45)	22.3 (46)	24.9 (46)
Latin America	21.3 (25)	26.9 (27)	29.4 (23)	31.3 (19)	31.0 (17)
Asia	25.8 (18)	26.4 (17)	25.7 (18)	28.0 (15)	27.2 (16)
Middle East/ North Africa	14.5 (10)	19.3 (10)	23.9 (13)	19.8 (13)	19.6 (10)
Less developed countries (LDCs)	21.0 (37)	23.0 (37)	21.7 (39)	21.6 (38)	22.7 (38)
Low-income countries (LICs)	21.6 (44)	23.4 (45)	25.6 (48)	23.5 (47)	22.8 (47)
Medium-income countries	21.0 (49)	24.2 (51)	26.4 (51)	27.6 (46)	28.0 (42)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: GFS (International Monetary Fund), national data; authors' calculations.

2.3-1   Evaluation of potential space in government revenues from direct taxes

As for VAT, assessment of changes over time in a single country combined with international comparisons may lead to the identification of under-exploited space within direct taxes. Because of their very different characteristics, we shall distinguish tax on companies' profits from general taxes on income, which concerns individuals.

For specific countries, it is useful to consider national accounting data relating to income received by various economic entities (employees, the self-employed, professionals) and also data relating to some income categories (property income, income from financial investment) and compare these data with tax contributions made by these entities or within the scope of these income categories. It then becomes possible to identify under-exploited space in resources.

2.3-2 Space in property tax revenue

It will also be useful to examine property taxes, which mostly consist of urban property taxes[9]. Experience shows that despite action to modernise property tax and excessively optimistic expectations that are sometimes harboured with regard to property taxes, these taxes do not constitute, and nor is it their vocation to constitute, substantial resources for central government authorities. However, property tax should become an increasingly important tax resource for urban authorities, which play a growing role in the provision of public goods.

Again, in case studies, comparisons between the value of existing urban property assets and income received from this property should enable under-exploited areas of taxation to be identified.

3. Measures for improving government revenues mobilisation

If mobilisation of revenue is to be improved, influence must be exerted on both the level and quality of government revenues. This means having a level of government revenues which, combined with other resources (internal deficit financing, external financing), will create a fiscal space which can provide long-term finance for the public expenditure necessary to development. This also requires resources that are as stable as possible, a result of a low level of economic distortions and distributional effects compatible with poverty reduction strategies.

Improvements in government revenues, in terms of resource levels as well as their structure, requires tax reform; a consensus has been reached in recent years about international best practice in this area. When analysing specific countries, it could be useful to assess how far best practice is applied and to gauge its impact on government revenues levels. However, given the current consensus, it seems useful to emphasise, when analysing specific countries, the essential issues that are still unresolved, such as creation of institutions and economic policies that favour reform, the degree to which VAT is economically neutral, the effectiveness of measures aimed at taxing unofficial economic activity, and the possibility of taxing agricultural activity. Furthermore, major importance will be attached to general measures relating to the taxation environment, such as institutional and macroeconomic factors; these also affect the ability to mobilise financial resources.

3.1 Tax reforms for improving government revenues mobilisation

Changes in the economic and social environment in developing countries have brought about successive taxation reforms. Increasing levels of expertise have enabled modifications in all aspects of the tax system and in administration methods in the specific context of developing countries, but experience in recent years has shown the necessity to promote greater transparency on the impact of reforms to ensure their effective implementation.

---

[9] Taxation of rural property assets is very difficult in many developing countries. It is almost never attempted in Africa, and therefore cannot form a short-term measure to aid central public finances.

3.1-1 Transparency and tax reforms

In many developing countries, the adoption and implementation of tax reforms, some of which were major reforms, have mainly resulted from a technocratic decision-making process. Although the reforming methods were generally increasingly better suited to the specific contexts of developing countries, the technocratic nature of the reforms made the development of democratic principles increasingly difficult.

Particular attention should therefore be paid to the steps taken to ensure that the tax reform measures are compatible with the development of taxpayers' compliance. Among the conditions being imposed with increasing force in democratic systems is transparency of information:

Government authorities, parliaments, social organisations and populations as a whole are demanding more (and more comprehensive and transparent) information on taxation and its implications. This implies carrying out studies on the impact of tax measures and estimating the tax expenditure resulting from tax exemptions (Brixi et al., 2004). In this respect, we can cite the case of Morocco, where an evaluation of tax expenditure is annexed to the 2006 Finance Act. In an increasing number of countries, analyses of the impact of tax reforms are being carried out with increasing frequency.

3.1-2 Measures relating to the tax system

Analysis on the basis of the numerous available expert studies of the tax system (definition of taxes, importance of exceptional measures and exemptions) enables assessment of how far this system has been modernised and modified. The complexity of taxation systems can be understood by using quantifiable indicators such as the number of VAT rates, the extent of VAT exemptions and the income tax scale. However, these indicators are particularly useful in assessing changes within a single country. Difficulties in accessing consistent information about a large sample of developing countries certainly means that greater importance is attached to qualitative analyses in countries being studied.

3.1-3 Measures relating to tax administration

Significant progress has been made in increasing the organisational efficiency of inland revenue and customs bodies responsible for collecting government revenues. By doing so, modern tax administrations have adopted a system organised by taxpayer category rather than by tax type. This organisational method gives the tax administration an overview of the payment record of each taxpayer. Moreover, taxpayers benefit from having a single point of contact with the tax authorities. Likewise, administration of a modern tax system, and particularly a VAT system, presumes that relatively high allowances are given, and that there are controls based on automated real-time checking; such controls require a unique tax number which is used effectively by customs and tax services, and functional IT solutions in these two areas. In the end, if modern controls are to be effective and affordable for administrations and businesses, they must be targeted.

Specific assessment of each country on the basis of available analyses[10] will enable the effectiveness of administrative measures to mobilise government revenues to be assessed.

3.2   Institutional factors and mobilisation of government revenues

Development of fiscal space may require action on the part of some institutions in order to promote pro-tax behaviour (behaviour that is tolerant of a certain amount of fiscal pressure). In other words, institutional determiners of demand for tax effort such as inequality and consent to pay taxes at a level that is a direct function of the citizens' attitude towards the government (Frey 1997). Consent to pay taxes is granted proportionally; as additional supplies of public goods are offered in return for tax payments, consent is strengthened. It is not therefore surprising that Acemoglu and Robinson (2001) explain the level of taxation in terms of the degree of democracy of the political regime in place. When the government is corrupt, and confidence in the institutions is low, citizens' incentive to cooperate is also low, which undoubtedly results in government revenues remaining inadequate when compared to potential levels.

The existence of a legitimate government that is recognised as such by the population is therefore a necessary condition for the development of real fiscal space. The expression of this legitimacy in societal institutions (see Bird, Martinez-Vazquez and Torgler, 2005) is therefore a good indicator of citizens' incentive to cooperate with the government; in fact we can consider that the more advanced the societal institutions, the more a population is likely to accept a high level of taxation, all other things being equal.

A favourable institutional environment is vital to the mobilisation of resources: in countries being studied, it is therefore important to identify the reforms that need to be instigated, particularly those reforms that relate to institutions, to encourage appropriate choices. Analysis of some specific countries must also demonstrate whether aspects of political economy reform are favourable to adoption of reforms: support must be sought from some groups of taxpayers, and a strategy for sharing the costs and benefits must be found.

Conclusion to Chapter 2

Analysis of changes in actual government revenues (tax and non-tax revenues) is the first step in the process of identifying, from comparisons between countries and between groups of countries, under-exploited space in government revenues. This analysis examines change and volatility in government revenues in the relevant countries; volatility of government revenues, which particularly affects the poorest countries, has a negative effect on space in government revenues.

Evaluation of tax effort, which is an indicator of the impact of economic policies on levels of government revenues, enables refinement of forecasts by identifying the sector of government revenues that is determined by structural factors (and over which the government can have little influence in the short term) and the sector that is influenced by economic policy. Positive tax effort (when economic policy determines a larger proportion of space in

---

[10] A possible recent reference is Chambas et al. (2005), in which tax administration is shown to have an important role; an older, but information-rich, reference is Bird, Casanegra de Jantscher (1992).

government revenues than structural factors do) may signal that resource potential is fully mobilised, while negative tax effort tends to indicate that there is an under-exploited space in resources.

An approach using main tax categories enables assessment to be made of the governments' ability to maintain space in their revenues during tax transition. This involves assessing governments' capacity to make up for losses in tariff receipts, which will be demonstrated in the conceptual document, through strengthening of internal taxation resources. In the first step (first-generation tax transition) this assessment is made primarily on domestic indirect taxation, particularly VAT; it can also address revenue from direct taxes.

Tax reform must act on the rate and structure of government revenues, and must envisage higher returns and also economic neutrality; reform must also take the utmost care to achieve poverty reduction. In analyses of specific countries, assessment must be made of reforms to the tax system which would be desirable, considering these three objectives; in terms of tax administration, because of the current consensus, country analyses must evaluate, using existing analyses, how far best practices are applied. Studies of specific countries should provide an analysis of the key issues that are still unresolved, such as the creation of institutions and economic policies that favour reform, the degree to which VAT is economically neutral, the effectiveness of measures aimed at taxing unofficial economic activity, and the possibility of taxing agricultural activity. Furthermore, major importance will be attached to general measures relating to the taxation environment, such as institutional and macroeconomic factors; these also affect the ability to mobilise financial resources.

Chapter 3: Fiscal space: Internal resources for financing budget deficit

Introduction: Financing the budget

The proportion of public expenditure that is not fully covered by government revenues must be funded using <mark>domestic and external resources</mark>. This proportion of public expenditure represents the net need for finance (less servicing of public debt). This net need for finance (Table 3-1) is met by grants, internal and external loans, and monetary finance.

One means of monetary finance is by borrowing from the Central Bank, but this is difficult to consider as a true loan, for three reasons: i) the loan can generally not be refused by the Central Bank; ii) there is generally no cost attached to the loan and iii) the loan is usually not paid back.

There are other budget-balancing methods which are attractive for various reasons. There are conventional deficits (Table 3-2) which represent net need for finance after grants are integrated into income figures. Thirdly, we examine the primary balance, in other words the balance without debt servicing, including international grants in income figures (Table 3-3).

For all developing countries, net financing needs and conventional deficits (Tables 3-1 and 3-2 respectively), and therefore also the corresponding financial contributions, fell sharply during the observation period (1980 to 2003). Therefore the finance need, corresponding to net loans supplemented by grants and monetary finance, reduced from 7.8% to 5.6% of GDP. In parallel with this, conventional deficit, which corresponds to payments on net loans and monetary finance, fell by around two GDP points, going from 4.8% to 2.9%. A downward trend in grants can be noted: from 3% to 2.7% of GDP.

Based on the geographical distinctions outlined above, the situation specific to Sub-Saharan African countries is highlighted, where financing requirements (with and without loans) are highest. This is not surprising, given the large number of African countries that are classified as less developed or low-income countries, two categories in which greater than average finance requirements can be observed.

Table 3-1:	**Net financing requirements (budget deficits, grants excluded from income figures): changes and international comparisons**				

Units: percentage of GDP

	1980-1984	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2003**
Developing countries	-7.8 (78)	-7.6 (81)	-8.4 (83)	-6.9 (84)	-5.6 (91)
Sub-Saharan Africa	-9.4 (40)	-9.3 (43)	-11.0 (44)	-8.9 (44)	-8.5 (45)
Latin America	-3.3 (17)	-3.0 (17)	-2.6 (15)	-2.9 (14)	-2.6 (17)
Asia	-10.7 (10)	-9.0 (9)	-7.7 (12)	-5.8 (14)	-3.1 (16)
Middle East/ North Africa	-4.9 (11)	-6.2 (12)	-5.5 (12)	-3.0 (12)	-2.5 (13)
Less developed countries (LDCs)	-11.2 (33)	-12.6 (36)	-14.4 (36)	-10.8 (38)	-10.1 (38)
Low-income countries (LICs)	-10.4 (39)	-11.5 (41)	-11.8 (43)	-9.2 (45)	-8.0 (47)
Medium-income countries	-5.1 (39)	-3.7 (40)	-4.5 (40)	-4.0 (39)	-2.8 (44)

(.) : Size of sample.

The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).

Sources: GFS (International Monetary Fund), national data; authors' calculations.

Table 3-2: **Conventional deficits (grants included in income figures): changes and international comparisons**

Units: percentage of GDP

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing Countries	-4.8 (72)	-3.3 (75)	-4.5 (77)	-4.4 (78)	-2.9 (87)
Sub-Saharan Africa	-5.5 (39)	-3.8 (43)	-5.3 (44)	-4.8 (44)	-3.8 (45)
Latin America	-2.6 (14)	1.0 (12)	-1.0 (11)	-2.5 (10)	-1.6 (15)
Asia	-8.3 (10)	-6.4 (9)	-5.6 (10)	-6.1 (12)	-1.9 (16)
Middle East/ North Africa	-1.0 (9)	-4.0 (11)	-3.1 (12)	-1.9 (12)	-2.0 (11)
Less developed countries (LDCs)	-7.1 (32)	-5.9 (35)	-7.0 (36)	-6.0 (38)	-4.2 (37)
Low-income countries (LICs)	-7.0 (38)	-6.3 (40)	-6.6 (41)	-5.5 (43)	-3.6 (46)
Medium-income countries	-2.3 (34)	0.0 (35)	-2.0 (36)	-2.8 (35)	-2.2 (41)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: GFS (International Monetary Fund), national data; authors' calculations.

Calculation of primary balance is doubly useful. On the one hand, interest on debt arises from past financial commitments and does not result from political decisions for the current budget year. On the other hand, the level of primary balance (grants included in income figures) is an essential factor in the sustainability of public debt: if the real interest rate is higher than the real rate of economic growth, constraints imposed by financial stability imply that any primary surplus will have to be used (see § 2.2.1 in Chapter 3).

Over the last observation period (2000-2003), on average, all developing countries ran a primary surplus of 0.6% of GDP, compared to a primary deficit of 3.6% of GDP in the early 1980s, which compromised public finance stability.

African countries, such as LDCs and LICs, still experienced a primary deficit. However, this primary deficit is limited in size. Furthermore, for these countries, the loans taken out are largely on preferential terms. From data on primary balances over the period 2000-2003 it can be concluded that there is a clear trend towards improvement in public finance stability in these countries.

Table 3-3:   **Primary balance (grants included in income figures): changes and international comparisons**

Units: percentage of GDP

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing Countries	-3.6 (62)	-0.3 (66)	-1.1 (69)	-0.8 (73)	0.6 (81)
Sub-Saharan Africa	-3.6 (38)	-0.2 (43)	-1.4 (44)	-1.0 (44)	-0.6 (45)
Latin America	0.6 (12)	5.2 (10)	3.2 (9)	1.1 (10)	1.8 (13)
Asia	-9.2 (6)	-3.6 (5)	-0.9 (7)	-2.0 (8)	1.2 (13)
Middle East/ North Africa	-6.0 (6)	-5.7 (8)	-4.1 (9)	-0.3 (11)	2.6 (10)
Less developed countries (LDCs)	-5.2 (29)	-2.1 (33)	-2.9 (35)	-2.3 (36)	-1.9 (36)
Low-income countries (LICs)	-4.8 (35)	-2.0 (38)	-1.7 (40)	-1.1 (41)	-0.6 (43)
Medium-income countries	-2.1 (27)	2.1 (28)	-0.2 (29)	-0.4 (32)	1.9 (38)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
<u>Sources</u>: GFS (International Monetary Fund), national data; authors' calculations.

In financing a conventional deficit, it is possible to distinguish funds originating externally (loans) from internal finance resources. Since the 1990-1994 period (the data from the 1980s are not comprehensive enough to be compared to recent data), external borrowing as a proportion of deficit finance has fallen from 2.8% to 1.2% of GDP; as a relative proportion, from 60% to 40% (see table 3.4). For countries in Sub-Saharan Africa, this fall was still more marked, as external financing, which in 1990-1994 represented three-quarters of finance, fell and now represents only one third of finance.

Table 3-4:   **Structure of conventional deficit financing: external financing**

Units: percentage of GDP

	1990-1994	**1995-1999**	**2000-2003**
Developing Countries	2.8 (69)	1.8 (73)	1.2 (81)
Sub-Saharan Africa	3.9 (44)	2.4 (44)	1.2 (45)
Latin America	0.7 (9)	0.8 (10)	1.6 (13)
Asia	1.1 (7)	0.8 (8)	0.5 (13)
Middle East/ North Africa	1.4 (9)	0.7 (11)	1.8 (10)
Less developed countries (LDCs)	4.5 (35)	3.2 (35)	2.0 (35)
Low-income countries (LICs)	4.6 (40)	2.7 (41)	1.2 (43)
Medium-income countries	0.5 (29)	0.6 (32)	1.3 (38)

(.) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003). Given the lack of availability of external finance data for the 1980s, the averages by group of countries for the periods 1980-84 and 1985-90 rely on much smaller samples than for the periods 1991-94, 1995-99 and 2000-03. These can not reliably be compared to more recent data, and are therefore not present.
Sources: GFS (International Monetary Fund), national data; authors' calculations.

Analysis of internal resources that are suitable for financing a budget deficit, and thus increasing public expenditure, is carried out in three steps. Firstly, the different internal sources of internal financing for a budget deficit, i.e. currency creation and borrowing, are explained; the scope and structure of these are outlined. Secondly, the economic implications of the two funding methods are presented. Finally, we examine the conditions under which an increase in these resources, and in particular borrowed resources, is required.

1. Two ways of funding a budget deficit using internal resources: definitions and current situation

The aim of this first section is to analyse the structure of internal budget deficit financing in development countries, having first defined the two ways of doing so, namely borrowing and currency creation.

1.1 Finance using borrowing and currency creation: definitions

It is easy to distinguish debt financing from finance by currency issue; it suffices to examine an issue of public bonds underwritten by companies or individuals (a prototype of debt financing), alongside direct action by the government's Central Bank (a prototype of monetary national debt finance). But there are intermediate situations which are more difficult to characterise.

In developing countries, most internal government borrowing passes through banks, because financial markets are not well developed. However, bank loans to the treasury (whether in the form of direct credit to the government or, more generally, issue of public bonds) are compensated for in the form of current account or fixed-term deposits from the public, in other words currency or quasi-currency, which means that this means of financing is similar to currency financing. If bank loans to the public sector are automatically rediscounted by the Central Bank at a rate much lower than the market rate, then effectively this finance method is very close to finance by direct advance from the government's Central Bank and must be considered to be monetary financing by the government. Conversely, if banks buy treasury bonds or public bonds on the financial markets, at the same price as non-financial agents, they play their normal role of financial intermediary and such a transaction therefore comes under the category of debt financing. In order to distinguish the two types of finance, it is useful to analyse the conditions under which Central Banks re-finance secondary banks.

On the other hand, even in countries where the Central Bank is not authorised to make direct advances to the government, currency creation remains a financial resource available to the government. Through the intermediary of its Central Bank (public body whose profits make up part of national government resources) it exercises its privilege of issuing physical currency that costs less to manufacture than the face value of the notes.

The profit obtained by the government from central currency issue is known as 'seigniorage' and it takes the form either of direct advances from the Central Bank to the treasury, or of dividends paid by the Central Bank. For this reason, part of seigniorage does not go towards financing the budget deficit, as this is government revenue and belongs to the government. This portion of seigniorage is unfortunately not usually identified in financial statements.

1.2   A primary source of financing: Debt

1.2-1 Forms of domestic debt

Domestic debt can take two forms; either formal debt using issue of public bonds, or accumulated payment arrears with government suppliers and employees. Financing using accumulated payment arrears is misjudged. In theory, this accumulation can be understood as the difference between committed expenditure and payments made. However, the figures for 'commitment base' and 'payments base' worsen as arrears increase, particularly because actual expenditure has not been subject to a proper accounting procedure. Because of this, accounting variations to do with arrears is not well understood.

Analysis of debt structure must also examine the conditions under which this debt is incurred (interest rate, concessionary rates on external loans, duration). For internal debt, particular attention must be paid to interest rates, and whether the rate is similar to market rates.

1.2-2 Institutional indebtedness factors

Incurring debt is sometimes limited by formal rules (with no particular distinction between internal and external debt). Any government may in principle establish such rules, but these most often arise in cases of monetary union. One example is the Stability and Growth Pact in the European Monetary Union, which prescribes an upper limit on national debt of 60% of gross domestic product. An equivalent rule exists in the West African Economic and Monetary Union (UEMOA), where, following the 'convergence, stability, growth and solidarity pact' adopted in 1999, 'internal and external debt as a proportion of nominal GDP must not exceed 70%'. The same rule has applied since 2002 in the Economic and Monetary Community of Central Africa (CEMAC). At the same time, it is envisaged that Governments will not accumulate arrears on domestic or external payments, and that they must progressively eliminate existing arrears.

The aim of these rules (which, in the two African monetary unions, are accompanied by rules relating to budget equilibrium) is to maintain coherence between a single monetary policy (laid down by the Central Bank of the monetary union) and national budgets. These rules should eliminate budget policies that contradict the main objective of the Central Bank - to control prices. They also aim to avoid a situation in which some governments make excessive use of regional financial resources or compromise, in servicing their foreign debt, the balance of payments in the zone.

1.3   A secondary source of financing: seigniorage

1.3-1   The two components of seigniorage

Resources obtained by the government using seigniorage consist of two components, traditionally known as virtuous seigniorage and inflation tax. This distinction is different from the previous one, which presented seigniorage as either dividends paid by the Central Bank or direct advances to the government. Virtuous seigniorage is the proportion of the increase in money supply issued by the Central Bank (known as central currency) which corresponds to an increase in demand for real reserves as a result of economic growth. When currency is created there can be a concomitant real equivalent increase in demand for currency, due to an increase in incomes. An inflation tax results if the central money supply is greater than the demand for currency, causing inflation.

The mechanism behind this is as follows: as inflation reduces the real level of reserves, agents agree to increase their stock of nominal reserves in order to rebuild their reserve levels. Inflation then acts as a tax, by reducing the real value of money; in order to hold a given level of reserves in real terms, agents must hold a greater value in nominal reserves.

It is straightforward that an inflation tax exists, and that the government benefits from this, when excess currency creation results from direct advances from the Central Bank to the treasury. But this also occurs when inflation originates in excessive expansion of funds to the private sector. Increase in circulating central currency in the economy increases remunerative assets held by the Central Bank, and therefore increases the Central Bank's profits. Moreover, the government can recoup part of the profits due to banks which issue money in note form (unredeemed current account funds), which is particularly important in an inflationary situation, because of the banks' obligation to hold non-remunerative reserves in account at the Central Bank.

Seigniorage can be measured in two ways.

- In terms of opportunity cost, as the government would have had to spend money in the form of interest payments but has saved this money by issuing currency which incurs no interest instead of giving out these loans.

- Another way is to measure it as income received as a result of the licence to print money, in other words, by increasing the money supply (Fischer, 1982). This second measure is the most usual, and enables the two components of seigniorage to be distinguished[11].

Supposing that the composition of the money supply in terms of physical currency issued by the Central Bank and in terms of bank money issued by secondary banks, the levels of reserves imposed on the bank and speed of circulation of the money supply are all constant[12] the following equation can be derived:

---

[11] These two measures are only equivalent if the reference interest rate is equal to the inflation rate plus the real interest rate, which itself is supposed to be equal to the rate of economic growth.

[12] In other words, the ratio of money supply to central currency (M/Mc), usually known as the credit multiplier, is stable, as is Y/M, such that $\delta Y/Y + \delta P/P = \delta M/M = \delta Mc/Mc$.

$$\frac{\partial Mc}{P} = \frac{\partial Mc}{Mc} \times \frac{Mc}{P} = \left[\frac{\partial Y}{Y} + \frac{\partial P}{P}\right] \times \frac{Mc}{P} = \left[\frac{\partial Y}{Y} \times \frac{Mc}{P}\right] + \left[\frac{\partial P}{P} \times \frac{Mc}{P}\right]$$

where Mc represents money issued by the Central Bank, P the general level of prices and Y national income. On the right hand side of the equation, the first bracketed term represents the increase in demand for real reserves in central currency, which is linked to economic growth (virtuous seigniorage) and the second term is inflation tax. The level of real reserves Mc/P constitutes the base for taxation and the inflation rate represents the rate of tax (see table 3-5).

Inflation sometimes leads to additional revenue which is linked to a real fall in value of internal debt. This last phenomenon only arises if inflation was unanticipated, such that the nominal interest rate does not fully compensate for inflation (the real interest rate of government borrowing is negative). This cannot exist in countries which suffer chronic inflation, insofar as inflation is anticipated; moreover, in these countries debt is generally indexed (Dornbusch, Sturzenegger and Wolf, 1990).

1.3-2 Institutional Factors in Seigniorage

The extent of reliance on seigniorage varies greatly from country to country, as growth and inflation rates vary so much between different developing countries (Tables 3-5, 3-6 and 3.7). However, the capacity of governments to make use of seigniorage is directly linked to institutional factors, which define the status of currency creation.

In some countries, the independent status of the Central Bank with respect to the political authorities, supported by a ban on direct advances from the bank to the government and where the bank's remit favours monetary stability, tends to limit the level of seigniorage to its virtuous component. Thus in case studies it is useful to assess the effective degree of independence that the Central Bank has, and to establish the rules governing advances from the Central Bank to the treasury.

When a country is a member of a monetary union, the division of seigniorage between the union's members depends on the authorised levels of advances in each government and on the rules regarding sharing the Central Bank's profits between the share-holding Governments. For example, in the two African monetary unions, the cumulated advances made by the multinational Central Banks (BCEAO and BEAC) to the Treasuries are statutorily prohibited from exceeding 20% of tax receipts in a given fiscal year; moreover, following the switch in 1994 from monetary unions to economic and monetary union, the governments decided to progressively reduce direct advances from the Central Bank to governments to zero. This did not occur in all governments, however.[13] In the end, the level of seigniorage which may supplement government budgets depends on statutory rules regarding the sharing of the Central Bank's profits. In the case of African monetary unions, the Bank's profits may be used for projects of interest to all, before being shared between the governments. For the balance, the profits are distributed pro rata to each government on the basis of their contribution to the Central Bank's capital, and not according to the geographical origin of the seigniorage.

---

[13] West African Monetary Union, involving Benin, Burkina Faso, the Ivory Coast, Guinea-Bissau, Mali, Niger, Togo, Senegal, and the Union of Central African governments, comprising Cameroon, the Central African Republic, the Republic of the Congo, Gabon, Equatorial Guinea and Chad.

Table 3-5: **Seigniorage and inflation tax: changes and international comparisons**

Units: percentage of the previous year's GDP

	1981-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	3.0 (97)	3.7 (100)	3.4 (110)	2.3 (115)	2.1 (114)
of which inflation tax	*1.7*	*1.9*	*1.9*	*1.2*	*0.7*
Sub-Saharan Africa	2.4 (36)	2.8 (38)	2.8 (43)	3.0 (46)	2.3 (46)
of which inflation tax	*1.5*	*1.5*	*1.6*	*1.3*	*1.0*
Latin America	4.3 (30)	5.7 (30)	4.8 (30)	1.3 (30)	1.4 (30)
of which inflation tax	*2.1*	*2.7*	*2.4*	*0.8*	*0.6*
Asia	2.1 (19)	2.3 (21)	2.6 (24)	2.1 (24)	1.4 (23)
of which inflation tax	*1.0*	*0.8*	*1.3*	*0.9*	*0.4*
Middle East/ North Africa	3.4 (12)	3.9 (11)	2.9 (13)	1.6 (15)	2.9 (15)
of which inflation tax	*3.3*	*3.8*	*2.1*	*1.2*	*0.3*
Less developed countries (LDCs)	2.7 (32)	3.3 (35)	3.0 (41)	3.4 (45)	2.1 (44)
of which inflation tax	*1.6*	*1.5*	*2.0*	*1.6*	*1.0*
Low-income countries	2.6 (41)	3.4 (45)	3.7 (50)	3.4 (54)	2.5 (53)
of which inflation tax	*1.5*	*1.9*	*2.2*	*1.6*	*1.0*
Medium-income countries	3.3 (56)	3.9 (55)	3.2 (60)	1.2 (61)	1.6 (61)
of which inflation tax	*1.8*	*1.9*	*1.6*	*0.7*	*0.4*

Finally, some developing countries have abandoned their national currency and adopted a foreign currency as legal tender. For example, Ecuador has adopted the dollar as its legal currency (see annex 3-1); it has therefore transferred its powers of seigniorage to the United Governments. There are more countries which, without completely abandoning their national currency, have been obliged to tolerate parallel use of a foreign currency. The greater the ratio between currencies in general and local currency, the more limited the level of seigniorage from economic growth, and the more limited the resources that can be obtained from a given rate of inflation. This is the case in many countries in Latin America and Asia, particularly Cambodia, Laos and Vietnam (see table 3-8)[14].

---

[14] In central Europe and in the former Soviet republics, the Euro is also used as a currency in place of the national currency. In sub-Saharan Africa, the two CFA francs are used far beyond the issue zone. However, their distribution has reduced since, in 1993, the BCEAO and BEAC stopped buying back banknotes that had left the issue zone.

Table 3-5 (continued): **Seigniorage and inflation tax: changes and international comparisons**

Units: percentage of the previous year's GDP

	1981-1984	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2003**
Senegal	1.6	1.0	0.3	0.2	1.1
of which inflation tax	*1.2*	*0.2*	*0.4*	*0.2*	*0.1*
Nigeria	0.4	2.2	5.8	1.3	3.5
of which inflation tax					
Zambia	1.6	7.5	6.0	1.0	2.4
of which inflation tax	*0.0*	*3.6*	*4.0*	*1.2*	*0.8*
Brazil	5.4	40.6	154.7	0.9	2.7
of which inflation tax					
Argentina	51.9	111.0	21.1	0.0	2.9
of which inflation tax					
Panama	0.0	0.0	0.0	0.0	0.0
of which inflation tax	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
China	0.0	10.9	9.9	5.8	5.3
of which inflation tax	*0.0*	*2.0*	*3.2*	*1.6*	*0.1*
India	1.7	2.5	2.4	1.6	1.4
of which inflation tax	*1.1*	*1.0*	*1.3*	*1.2*	*0.5*
Bangladesh	1.0	1.0	1.0	0.4	0.9
of which inflation tax	*0.0*	*0.2*	*0.3*	*0.4*	*0.3*
Egypt	10.2	4.1	4.9	2.3	5.7
of which inflation tax					
Morocco	1.6	2.0	1.9	1.6	2.6
of which inflation tax	*1.4*	*0.6*	*1.1*	*0.5*	*0.4*

Notes:

1/ (.) : Size of sample.

2/ The data presented are non-weighted arithmetical averages, calculated on a period of five years (1985-1989, 1990-1994, 1995-1999) and two four-year periods (1981-1984 and 2000-2003).

3/ Seigniorage (SG) is calculated to be the ratio of central currency (CC) or base currency and the GDP of the preceding year: that is $SG = (CC_t - CC_{t-1})/GDP_{t-1}$

4/ Inflation tax (IT) corresponds to the percentage loss in real value of the central currency stock, this last being expressed as a proportion of GDP: that is $IT = [\delta/(1+\delta)]*[CC_{t-1}/GDP_{t-1}]$

5/ Calculation of averages by group of countries is done by imposing a maximum 20% threshold on seigniorage value, in order not to put too much emphasis on observations lying farthest from the mean.

6/ Breakdown of total seigniorage into 'virtuous' seigniorage and inflation tax relies on the central currency multiplier and rate of currency circulation remaining relatively stable. During certain periods when there is significant currency volatility, these parameters undergo major variation and the breakdown calculations become less relevant (in particular, the calculated value of inflation tax may be greater than the total value of seigniorage). For countries which have experienced such conditions in the relevant period (Brazil, Argentina, Nigeria and Egypt), the value of inflation tax cannot be interpreted and is not presented in the table.

<u>Sources</u>: IFC (International Monetary Fund), WDI (World Bank), calculation by the authors.

Table 3-6: **Rate of GDP volume growth: changes and international comparisons**

Units: percentage change on the previous year

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	2.6 (106)	3.4 (114)	2.9 (118)	4.1 (119)	3.4 (119)
Sub-Saharan Africa	2.3 (41)	3.4 (45)	1.8 (46)	5.4 (46)	3.3 (46)
Latin America	1.4 (32)	3.1 (32)	3.3 (32)	3.3 (32)	1.8 (32)
Asia	4.7 (22)	4.9 (24)	5.2 (26)	3.4 (27)	3.8 (27)
Middle East/ North Africa	3.7 (11)	1.6 (13)	6.4 (14)	3.4 (14)	3.2 (14)
Less developed countries (LDCs)	1.8 (36)	2.9 (41)	2.1 (44)	5.7 (45)	3.6 (45)
Low-income countries	2.7 (46)	3.5 (50)	1.5 (53)	4.2 (53)	4.2 (53)
Medium-income countries	2.6 (60)	3.3 (64)	4.2 (65)	3.8 (66)	2.7 (66)
Senegal	1.8	3.2	1.3	5.2	4.7
Nigeria	-3.9	5.7	3.6	2.5	4.9
Zambia	0.8	2.1	-0.8	1.6	4.2
Brazil	1.4	4.5	1.5	2.2	1.9
Argentina	-0.1	-1.4	6.8	2.3	-1.8
Panama	2.8	-1.0	6.8	4.5	2.4
China	9.6	9.9	10.7	8.8	8.3
India	5.6	6.2	4.9	6.5	5.4
Bangladesh	3.2	3.2	4.6	5.0	5.2
Egypt	7.4	4.4	3.6	5.2	3.8
Morocco	2.9	5.0	3.2	2.2	3.9

Notes:

1/ (.) : Size of sample.

2/ Calculation of averages by group of countries is done by imposing a -5% threshold on growth rate value, in order not to put too much emphasis on observations lying farthest from the mean.

3/ The data presented are non-weighted arithmetical averages, calculated on a period of five years (1980-1984, 1985-1989, 1990-1994, 1995-1999) and a four-year period (2000-2003).

Sources: WDI (World Bank), calculation by the authors.

Table 3-7: **Inflation: changes and international comparisons**

Units: percentage change on the previous year

	1980-1984	1985-1989	1990-1994	1995-1999	2000-2003
Developing countries	17.9 (94)	19.5 (104)	24.0 (106)	17.5 (107)	13.1 (107)
Sub-Saharan Africa	26.1 (33)	29.3 (40)	30.3 (41)	12.4 (40)	7.8 (40)
Latin America	11.4 (30)	9.8 (30)	12.9 (29)	9.7 (30)	4.8 (30)
Asia	15.2 (18)	19.8 (21)	12.9 (22)	6.6 (24)	2.1 (24)
Middle East/ North Africa	16.4 (13)	21.0 (13)	25.0 (14)	18.8 (13)	11.5 (13)
Less developed countries (LDCs)	17.5 (29)	22.2 (37)	30.8 (38)	20.7 (38)	12.0 (38)
Low-income countries	20.0 (35)	20.7 (44)	20.2 (47)	10.4 (49)	6.4 (49)
Medium-income countries	2.3 (59)	3.1 (60)	4.0 (59)	4.2 (58)	2.9 (58)
Senegal	11.1	2.7	6.0	2.8	1.5
Nigeria	15.9	25.9	35.8	25.1	13.6
Zambia	n/a.	69.3	121.7	30.7	23.2
Brazil	132.4	532.3	1667.2	19.3	9.3
Argentina	268.1	863.3	505.1	0.8	9.3
Panama	5.8	0.5	1.1	1.1	1.1
China	5.9	14.8	10.4	5.2	0.3
India	10.5	7.7	10.2	8.9	4.0
Bangladesh	n/a.	7.8	4.9	6.5	3.3
Egypt	15.8	18.9	14.1	6.9	3.0
Morocco	10.2	4.9	6.2	2.7	1.6

Notes:
1/ (..) : Size of sample.
The data presented are non-weighted arithmetical averages, calculated on five-year periods (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
2/ Inflation is calculated to be the rate of change in the consumer price index with respect to the previous year
3/ Calculation of averages by group of countries is done by imposing a maximum 100% threshold on inflation rates, in order not to put too much emphasis on observations lying farthest from the mean.
Sources: IFC (International Monetary Fund), national data, calculation by the authors.

Table 3-8:   **Dollarisation rates in developing countries in 1999 (61 countries)**

Units: percentage (in ascending order)

Guatemala	0.2	Philippines	31.5
Bangladesh	0.4	Democratic Republic of Congo	32.2
Venezuela	0.4	Haiti	33.8
Comoros	0.5	Zambia	40.1
Thailand	1.4	Vietnam	40.5
Bahamas	1.8	Costa Rica	41.1
Malaysia	2.5	Russia	41.1
South Korea	2.6	Romania	43.1
South Africa	3.5	Mozambique	43.2
Mexico	7.3	Ukraine	43.7
Nigeria	7.4	Lithuania	43.8
China	8.0	Mongolia	45.4
Chile	8.5	Hong Kong	45.5
El Salvador	8.8	Turkey	47.2
Kenya	11.9	Moldova	49.6
Czech Republic	13.4	Bulgaria	52.6
Slovakia	16.3	Belarus	53.5
Malawi	16.9	Ecuador	53.7
Estonia	18.5	Lebanon	56.6
Poland	18.9	Argentina	61.8
Indonesia	19.4	Paraguay	62.5
Jamaica	20.5	Bosnia and Herzegovina	63.8
Egypt	22.0	Peru	65.7
Hungary	22.0	Nicaragua	67.8
Albania	25.2	Croatia	73.6
Guinea	27.9	Uruguay	80.8
Honduras	27.9	Angola	81.1
Uganda	29.4	Laos	89.6
Tanzania	29.5	Cambodia	92.3
Ghana	29.7	Bolivia	92.6
Slovenia	31.1		

Extent of partial dollarisation – breakdown by region

  - *Rate lower than 10% (14 countries):*

Sub-Saharan Africa:	3
Latin America	6
Asia	5
Middle East and North Africa:	0
Central and Eastern Europe:	0

  - *Rates between 10 and 50% inclusive (32 countries):*

Sub-Saharan Africa:	9
Latin America	4
Asia	5
Middle East and North Africa:	1
Central and Eastern Europe:	13

  - *Rate greater than 50% (15 countries):*

Sub-Saharan Africa:	1
Latin America	7
Asia	2
Middle East and North Africa:	1
Central and Eastern Europe:	4

2.   Economic implications of the two forms of internal financing on domestic resources

Debt and seigniorage have two main economic implications. First, they alter the domestic macroeconomic balance, particularly through their effects on interest rates and prices. Second, each type of financing has its own limits - there are sustainability issues with debt, and finding optimal levels of seigniorage is problematic.

2.1 Costs and macroeconomic effects of debt and seigniorage

There are different macroeconomic consequences arising when public expenditure is financed using (respectively) borrowing and currency issue (going beyond virtuous seigniorage). We shall consider their respective effects on private investment and inflation.

2.1-1   Level of private investment

Does increasing public expenditure with a view to reaching Millennium Development Goals risk crowding out private investment and therefore long-term growth (and poverty reduction depends on the rate of growth).

- By increasing borrowing levels, the government contributes to a rise in interest rates and therefore risks crowding out private investment. This result is avoidable[15] in three ways.

- In many developing countries, particularly in Sub-Saharan Africa, banks have an excess of liquidity and cannot find sufficiently secure and profitable use for their resources, such that borrowing from the government does not necessarily detract from private savings that are invested in businesses[16].

- This excess liquidity can be assessed by comparing the level of reserves in these banks with the level of deposits received. In some cases, an imposed high level of reserves is a symptom of this excess liquidity, as the monetary authorities are gradually increasing the level of reserves in order to absorb excess liquidity on the part of the banks. By increasing the issue of public bonds, the government is contributing to financial diversification and encouraging households to save more, and particularly to invest their money in domestic financial products instead of in goods or abroad. Later, we shall see the conditions required to obtain this positive effect.

- Public investment is, to a certain extent, a complement of private investment, and provides infrastructure and human capital on which the profitability of private capital depends (for a review of studies evaluating the relationship between public and private investment, see Gupta et al. 2005 and Sachs et al. 2004).

---

[15] If there is a floating exchange rate, there is a complete eviction effect: therefore budget policy is ineffective.

[16] If the banks' excess liquidity is initially placed domestically in the absence of strict regulation of banks' external monetary position, taking out Government bonds is effectively the same as bringing capital back into the country. If this liquidity is placed with the Central Bank and yields little to no return, taking out public bonds reduces available seigniorage.

By financing its expenditure using currency issue, a forced saving mechanism is assumed to alleviate the problem of crowding out private investment. In effect, the inflation tax is based on reserves held by economic agents, which lose value because of inflation. If these economic agents are aware of the impact of inflation on the real value of their reserves, they will increase their levels of savings in order to re-establish their reserves at their previous levels. But if these economic agents are unaware of this impact, or if they are unwilling to reduce their levels of consumption, they will not increase their levels of savings. There could then be a rise in interest rates, which could then send private investment abroad. Of course, if inflation increases profits made by businesses and banks, these bodies could increase their savings, particularly in the form of self-financing. This effect, which is an alternative form of forced saving in the presence of inflation, presumes that salaries increase at a slower rate than prices, and that profit on banks' investments is not indexed to inflation. This effect promotes private saving and is unstable and transitory at best.

If the government relies in the long term on the inflation tax, it is likely that economic agents will permanently reduce the target levels of their real reserves, which will reduce the tax base and therefore the tax take at a given rate of inflation. This reaction by households is amplified in partially dollarised economies, where it is easy to exchange foreign currency held in reserves for national currency. We will come back later to this reaction by deposit holders.

In conclusion, whatever way is chosen to finance a budget deficit internally, there is a risk that private investment will go abroad, but this risk can be reduced by exploiting the complementary relationship between public and private investments, and by using excess liquidity in the banking sector.

2.1-2 Inflation rate

The inflationary effect of public expenditure financing cannot be neglected. Cross-sectional growth studies have demonstrated that inflation has a negative effect on growth; furthermore, inflation has a greater effect on poor people than on the rest of the population (Dollar and Kraay, 2002, and Guillaumont Jeanneney and Kpodar, 2005). A large proportion of poor people's income is fixed (salary, government subsidy, imposed prices); moreover, a particularly large proportion of poor people's income is made up of local currency.

Financing public expenditure through currency issue entails a greater inflationary risk than does borrowing (and also more default risk of trade balance deficit). However, borrowing is not without dangers; if extra resources mobilised by the government act to finance social expenditure (which contains a lot of non-exchangeable services and goods, particularly salary costs), this results in an increase in demand for consumer goods, with no corresponding increase, at least in the short term, in domestic production of these goods, which leads to price increases. Such increases particularly affect poor households.

Debt and seigniorage also have significant effects on redistribution, which are analysed in chapter 4.

2.2   What are the limits on mobilisation of non-tax resources?

Both debt and seigniorage have strict limits, and it is useful to outline these here.

2.2-1   Sustainability of public finances

Increasing debt is only a possible solution if this debt remains sustainable, in other words if the government retains the capacity to service the debt in the long term. This capacity is determined both by the real cost of the debt, by changes in the primary balance and the economic growth cycle.

The relationship between debt levels and the budget balance, and real interest rates and economic growth, can be expressed as follows:

Thus:

where B represents outstanding public debt, Y the Product at constant prices, P the general level of prices, G* current public expenditure apart from debt interest, T government revenues, π the inflation rate, r the nominal interest rate and γ the rate of economic growth. The rate of indebtedness (the left-hand term in the equation) is dependent on the level of

primary budget deficit, the initial level of debt and the ratio

If the real economic growth rate γ is greater than the real interest rate (r − π), the preceding ratio is less than 1: Stability in the rate of indebtedness is compatible with a primary deficit, while if the situation is reversed, stability is dependent on a primary surplus. Thus, action favouring more effective financial intermediation, which was described above, and which would reduce the real interest rate on public debt, helps to make public finances more sustainable.

Economic growth has an effect on levels of government revenue (for a given level of taxation) and therefore also on the budgetary balance for a given volume of public expenditure G*/P. Public debt, which is a component of fiscal space, is justified in so far as additional expenditure funded in this way (by increasing infrastructure and human capital) contributes to an increased rate of growth.

However, the obstacle posed by sustainability of domestic debt cannot be analysed independently of external debt. It is therefore useful to assess the level of external debt and changes to this level, given possible cancellation of debt by international lenders.

On the other hand, it would be dangerous to base a debt policy on potential unilateral cancellation of debt. Governments have certainly sometimes defaulted on their domestic (or external) debt. However, this solution leads to governments losing credibility and reputation. It is therefore extremely costly for the economy as a whole (Cagan 1956). A way of achieving the same result for national currency debt is to employ an inflationary policy, which takes government creditors by surprise and reduces the real burden of public debt. But such behaviour by a government reduces the possibility of future private investment to help public expenditure.

Domestic public debt rarely obeys such standards. The literature demonstrates strategic use of debt in countries which are highly unstable and highly politically polarised.

For example, a 'conservative' government, somewhat hostile to public expenditure and anticipating being replaced in power by a government that is more in favour of public expenditure, will be tempted to increase debt levels: by increasing the burden of debt servicing, it reduces its successor's room for manoeuvre and prevents it from implementing its expenditure programme, as a large proportion of its resources must be used for servicing debt (Persson and Svensson, 1989). Distortions in debt levels can therefore be observed, which can be explained by interactions between economic considerations and political battles.

2.2-2 Optimal levels of seigniorage for public finances

Seigniorage is not an unlimited resource, even when the government has no institutional limits on currency creation. As we have noted previously, demand for real deposits is a negative function of the inflation rate, so that inflation tax, just like other taxes, is subject to a Laffer curve. Maximum seigniorage leads to a very high inflation rate (greater than 100% per year; see Bruno and Fischer 1990, Guillaumont Jeanneney 1998). But high inflation is inevitably accompanied by dollarisation, which tends to reduce levels of seigniorage resulting from a certain level of inflation. The government is therefore obliged to sustain an ever-higher inflation rate in order to finance a constant deficit. This vicious circle should be avoided, because inflation is a factor in reduced growth rates and increased poverty, and because of this it causes a reduction in sources of non-inflationary finance.

However, seigniorage must not be excluded, even its inflationary component. Seigniorage can result from deliberate calculation (optimal seigniorage) and can be considered as a possible source of revenue (dynamic application of the Ramsey principle of public finance: Ramsey 1927, Mankiw 1987). The government will therefore seek to reduce administrative, economic and social costs of all taxation. No taxation, including the inflation tax, is fixed; at that moment, all tax levying entails changes in the behaviour of economic agents, resulting from a change in relative pricing structure. These changes in behaviour is a cause of economic ineffectiveness, known by the name 'dead weight'. It can therefore be shown that the objective of minimising the costs of taxation can best be achieved using diversification of taxation sources (making marginal costs of different taxes more equal). In general, the optimal level of inflation tax is not zero, but will be much lower than the maximal level outlined above.

The consumer price index probably over-estimates inflation (as it fails to take into account improvements in product quality), and zero inflation certainly corresponds to a deflation phenomenon (IMF, 2003). The negative effects of inflation are insignificant as long as price increases remain moderate. A reasonable increase in general price levels is therefore acceptable. Such an increase is combined with economic growth to determine the potential for seigniorage.

As an illustration: suppose that an economy with a growth rate and inflation rate at 5% and 3% respectively, and which has monetary characteristics similar to those in the West African Economic and Monetary Union (see Annual Report on the Franc Zone, 2004). Central currency (paper money and accounts in secondary banks to the Central Bank of West African States) represents 14% of GDP; possible levels of seigniorage are as follows: 0.08 x 0.14 = 0.0112, that is 1.12% of GDP, or around 6.5 of government revenue (which makes up around 17% of GDP). Considering only central currency held by non-financial agents, seigniorage would still make up 0.7% of GDP, or 4.4% of government revenue. This is a non-negligible amount, even though part of this revenue would have to cover the running costs of the Central Bank.

3. How should non-government sources of funding be increased with a view to financing the Millennium Development Goals?

It should be possible to relieve the pressure exerted on public finances by the extent of needs by having some expenditure financed by the private sector (for example drinking water and electricity supply networks, drains, and transport and telecommunications infrastructure). Furthermore, for healthcare centres and educational establishments it is possible to implement a selective cost-recovery policy which would enable poor people to obtain free or subsidised services.

A cost-recovery policy is particularly useful in public services which particularly benefit the better-off in a society (particularly hospitals, secondary schools, and universities). Policies for charging for public services which have little effect on poor people has an important role to play in achieving the Millennium Development Goals, by releasing resources for services which affect such people directly (such as healthcare and basic education).

Mobilisation through savings of resources for use by the government has three components: increase in the level of private savings, increased investment of these savings in the form of financial assets, and, finally, increased saving with the government.

3.1 Increasing private savings

The amount of private savings is largely determined by structural factors (economic, demographic and socio-political), which are difficult to alter in the short term (see table 3-9). Increasing savings involves a moderate effort at increasing and distributing revenue, as propensity to save tends to increase as revenue per capita increases. Furthermore, if consumption depends on ongoing revenue rather than current income, revenue growth becomes a negative influence on rates of saving. If we apply the consumption function to the life-cycle theory whereby people save during their working lives, levels of savings are a negative function of demographic dependence (the ratio of non-working to working people).

Table 3-9:   **Private savings: changes and international comparisons**

Units: percentage of GDP

	1985-1989	**1990-1994**	**1995-1999**	**2000-2003**
Developing countries	17.8 (58)	14.4 (68)	13.8 (71)	15.0 (71)
Sub-Saharan Africa	12.2 (24)	7.7 (29)	7.6 (35)	9.3 (34)
Latin America	18.4 (14)	14.0 (17)	14.3 (13)	14.1 (15)
Asia	22.3 (13)	25.7 (15)	27.0 (15)	28.1 (15)
Middle East/ North Africa	33.0 (7)	28.2 (7)	27.3 (8)	24.3 (7)
Less developed countries (LDCs)	8.5 (20)	8.1 (25)	8.3 (30)	9.5 (28)
Low-income countries (LICs)	12.7 (26)	9.5 (31)	9.4 (36)	10.1 (36)
Medium-income countries	22.0 (32)	18.8 (37)	18.8 (35)	20.6 (35)
Senegal	3.3	6.1	5.8	2.9
Panama	30.5	31.7	25.5	29.2
China	46.1	49.4	47.3	45.9
India	24.1	24.5	24.1	26.0

Notes:
1/ (.) : Size of sample.
2/ Data on private savings for African countries are taken from the African Database, and are expressed as percentages of GDP. For all other countries, private savings are calculated as the difference between gross domestic savings (taken from the World Development Index database) and public savings, expressed as a percentage of GDP. Public savings is calculated as being the difference between total revenue and final government expenditure.
3/ The data are very incomplete and do not cover our whole panel of developing countries.
4/ The data presented are non-weighted arithmetical averages, calculated on a period of five years (1980-1984, 1985-1989, 1990-1994, 1995-1999) and one four-year period (2000-2003).
Sources: WDI (World Bank), African Database (World Bank), calculation by the authors.

Savings behaviour also depends on cultural and political factors. Family solidarity can be considered as an obstacle to household saving. More importantly, the general political climate on which depend security of rights to private property and encouragement to save. In countries in which the economy has been liberalised, coupled with strengthening of the constitutional government, which tends to provide the private sector with opportunities for

profitable activities, savings have generally increased (which has been the case in South Asia and China).

The political, legal and macroeconomic environment are therefore important factors in achieving the Millennium Development Goals, partly because they determine economic growth, without which there can be no lasting reduction in poverty, and partly because they determine in part the level of private saving and therefore the level of potential mobilisable resources. The whole of a government's policy is therefore relevant here, not only specific measures intended to mobilise savings, which we shall now analyse in more detail.

3.2   Increasing financial savings

The primary 'financial' use for private savings is to increase deposits in physical money, such that the increased money supply increases virtuous seigniorage. Notes issues in response to an increase in demand provide additional income for the government, with no inflationary effect, as this does not contribute to excess liquidity in households.

It is nonetheless the case that there is most room for manoeuvre in borrowing. The aim of this second section is therefore essentially to analyse how improvements in the financial system would enable to do so. This would be done partly by increasing low- or medium-income families' savings with banks (these savings are usually hoarded in the form of currency and also as goods such as grain stores, livestock and land) and partly by keeping hold of savings made by high-income agents (which are often exported to more developed financial markets).

3.2-1   Obstacles to using banks for saving

In developing countries, the proportion of households that use a bank account (and therefore that have access to savings accounts) is low – 26% on average – while bank account use is almost universal in developed countries (90% of households on average). This figure varies widely from country to country: for Jamaica it is almost 60%, but for most poor countries the figure is below 10%. This lack of access must, however, be considered alongside the possibility of using informal financial services. Within each country access to savings accounts is also very uneven, and households with low income and education are most affected by this exclusion. The low levels of bank account use in low-income households can be explained both by inadequate supply of banking services for this section of the population, and by factors that limit demand[17].

Factors limiting supply

Three elements contribute to weaknesses on the supply side: production costs, banking regulation and the institutional framework.

- Excessively high production costs limit extension of supply to population groups who currently do not have access to banks, for three main reasons. Firstly, placing and operating a network of bank counters that would ensure that rural areas, and even disadvantaged areas of towns and cities, were properly supplied, is very expensive, and the profitability of such a venture declines as the population density decreases. At the macroeconomic level, the scale of this problem can be judged by counting the number of

---

[17] Annex 3-2 contains a summary of obstacles to using banks for savings.

bank counters per 1000 inhabitants. More precise data on accessibility (average distance from a bank counter or, better, length of time taken to reach a bank) can only be obtained by enquiries (such as the World Bank's Living Standards Measurement Study). Secondly, the financial services market is quite closed, and it is difficult for existing banks to reach the required size in order to benefit from economies of scale. The scale of this problem can be assessed by comparing the number of banks to GDP. A final explanation for these high production costs is the low level of competitiveness in the banking sector. This low level of competitiveness is often linked to a lack of competition in the banking system, and often leads to a very wide spread of interest rates (difference between lending and borrowing rates). The significance of this obstacle is also revealed through the level of banking charges and the existence of a minimum deposit amount. By comparing these amounts to general income levels in the economy (minimum or average annual salary, GDP per capita), it is possible to assess the weakness of 'accessible' supply to low-income households.

- Low levels of supply may be linked to overly restrictive regulation of banking activities. Relations between banks and their customers are subject to restrictions, particularly interest rate ceilings, which can be counter-productive if inflation rates are very high. Financial repression theory has shown that bank interest rate policies that lead to negative real interest rates prevents mobilisation of financial savings (McKinnon 1973, Shaw 1973). A positive level of remuneration is all the more necessary since the economic development process is often accompanied by a rise in property prices, which is likely to divert a large proportion of available savings into property (Deaton and Laroque, 1999). It is therefore necessary to analyse the determining factors for levels of real bank interest rates (regulation, inflation rate, competition in the banking industry) in order to identify ways of achieving attractive levels of remuneration.

Currently there is uncertainty in the theoretical and empirical literature as to whether a rise in real interest rates has a positive effect on levels of private savings. However, in low-income countries where most small businesses and individuals do not have access to bank credit and are forced to finance their own investments, building up reserves should be done before investment. A characteristic of banking supply is that access to deposit accounts is wider than access to credit (see table 3-10). Given this, the possibility of opening a bank account that attracts a real positive interest rate is a strong incentive to saving, as investment can then be made more rapidly and more profitably. This effect was dubbed the 'conduit effect' by McKinnon (1973). Even economists who put forward the hypothesis, which is undoubtedly excessive, that levels of interest rates has no effect on private savings, recognise that interest rates have an effect in moving savings from informal circulation into the formal financial savings system. The experience of Korea in the 1960s is particularly enlightening in this respect.

Banking activities are subject to prior agreements, which impose relative standards for capital, accounting rules and the like, and which limit entry into the market of new financial institutions. These standards, which were designed to regulate banking activity, are probably too restrictive to enable institutions to be formed that could meet the specific needs of low-income groups.

Table 3-10:   **Use of savings and credit**

Units: percentage of all households

| | | **% of households that have, during the last 12 months:** | |
		saved	obtained credit
China	1995-97	82.5	28.1
Guatemala	2000	17.8	31.8
Guyana	1992-93	15.7	4.7
Jamaica	1997	68.1	10.5
Kyrgyzstan	1998	11.3	6.1
Morocco	1990-91	15.5	22
Nicaragua	1998-99	6.5	22.5
Pakistan	1991	23.6	30.3
Peru	1994	25.2	16.6
Romania	1994-95	94.3	15.9
Vietnam	1997-98	89.9	49.1

<u>*Sources*</u>: *Claessens (2005)*

- Supply of financial services depends on the quality of the institutions in charge of economic activity. On the one hand, the legal framework is often inadequate, particularly from the point of view of protection of property rights and because it is difficult to enforce contracts or legal decisions. On the other hand, economic information networks (for example business financial reports, credit history for potential borrowers and payment default history for those opening accounts) are not well-developed. These two elements tend to dissuade banks from entering into some operations that are judged to be too risky, particularly in lending, but also in researching new customers for deposit accounts.

Factors limiting demand

Three main factors must be analysed to explain low levels of bank account usage: income levels, 'financial literacy' of potential users and the degree of trust in the banking system.
- Income levels have an effect on whether households use banking services. On the one hand, the poorest households are not likely to establish savings, in whatever form, and therefore do not demand deposit accounts which could be used for savings. On the other hand, households that have some small savings cannot accept the costs associated with managing a bank account, and mainly use informal finance or hoarding of agricultural products. This exclusion from demand can be assessed using indicators proposed for judging the 'real' extent of supply (bank charges and minimum deposit amounts as a proportion of income).

- Putting more savings in banks is also dependent on there being the necessary knowledge for using a bank account. This presumes a certain level of literacy, and also some basic idea of how a bank account works, which is far from widely known in low-income groups. This knowledge may collectively be known as 'financial literacy' (Claessens 2005).

-
- Low levels of bank account use is also linked to households' (and particularly low-income households') mistrust of the banking sector. The person opening an account is generally required to provide documents proving identity, address and, sometimes, level of income. Quite apart from any difficulty experienced by poor households in finding such documents, the identification procedure may well dissuade some potential depositors, particularly those involved in the informal sector. Their main fear is that the tax administration will use their data in order to tax their income and assets. Another factor, and this is by far the factor that puts people off the most, is that potential depositors do not trust the financial stability of the banking system. They particularly fear being unable to get back the amount they invested, if the macroeconomic situation deteriorates. This fear is often well-grounded, as experience shows that during financial crises small depositors are the worst affected. Typically they lose most of their deposits (either through bank failure or through account-freezing), while those with large amounts of assets have the means to protect part of their savings from the crisis by investing abroad. The more fragile the macroeconomic situation, the greater the mistrust. This fragility can be assessed by looking at the history of financial crises, as well as leading macroeconomic indicators of crises such as the inflation rate and the balance of payments situation (Kaminsky and Reinhart, 1996). In many countries, such mistrust leads to partial dollarisation of the economy, starting with savings, which itself contributes to the weakness of the banking system (see Gastambide 2005 for the case of Ecuador), particularly by making it very difficult to administer monetary policy (Guillaumont Jeanneney, 1994).

Investment of large amounts in financial markets of developed countries is done mainly because of the financial volatility outlined above, and because of the lack of profitable investments to be made in the national economy. It could also be the case, paradoxically, that regulation of international financial operations abroad, when such regulation imposes strict controls on currency exchanges and capital transfer abroad, holds back entry of capital without really preventing its exit. Assessment (which is admittedly approximate) of exiting capital seems to indicate that there is an inverse correlation between amount of capital leaving and the strictness of controls on capital movements: exiting capital levels are particularly high in Africa, which is a continent that controls currency exchanges heavily (see table 3-11).

Another source of domestic savings is remittances from emigrant workers. For some developing countries such transfers form a significant proportion of gross domestic product. These savings, which undergo significant transfer costs, are not often banked, as the recipients are themselves not bank users. Part of these transfers finances infrastructure projects in migrants' villages of origin, and contributes towards achievement of the Millennium Development Goals, but it could also be that most of the money is spent on consumption. Transfers from emigrant workers could therefore contribute more to funding the Millennium Development Goals, by increasing the proportion of savings that are put in banks and reducing the proportion that is 'lost' in the form of bank charges.

Table 3-11: **Capital going abroad: changes and international comparisons**

Units: percentage of total private property

	1980-1989	1990-1998
Sub-Saharan Africa:	27.4	30.3
Latin America and the Caribbean	7.5	7.9
South Asia	6.3	9.9
East Asia and Pacific	2.0	2.7

<u>Sources</u>: *Collier, Hoeffler and Patillo (2004)*

3.2-2   Looking for solutions

Having identified the main obstacles to getting national savings within the banking system, it is now possible to plan measures that would reduce these obstacles, and four main aspects can be distinguished, which work with demand and supply.

i) Extend range of available financial services within the economy.

Improvement of supply of financial services must take three directions.

- The main point is to promote creation of banking services designed for modest households. The principle is to offer 'basic' bank accounts incurring very low charges and simplified procedures for opening accounts. The 'Mzansi account' which was launched in South Africa in 2003 is an example of such an account, which has improved bank usage among low-income populations. This system, which was set up with the support of four large commercial banks and with the post office's banking network, aims to develop bank usage among low-income black populations. It offers the possibility of opening an account with a minimum deposit of 20 rand (around 4 dollars).

  In order for 'basic' accounts to be profitable – and therefore sustainable – the associated management costs must be reduced. Many ways of doing this must be examined. First, it is possible to use existing networks in rural areas, such as postal or trading networks. Also possible is having several providers competing on the same network, in order to create good conditions for competition and minimise fixed costs. There are also possible ways of accomplishing this using modern technology (mobile telephones, Internet).

- A larger variety of financial institutions would also be necessary. Increasing financial saving does not just rely on banks; it can also be supported by the insurance industry and building firms, which have significant growth potential. It can also be useful to identify, out of the major functions of the financial sector, the two basic functions, i.e. facilitation of payments and mobilisation of savings. The other two functions involve more risk management, i.e. credit and insurance. This would involve creating financial institutions that offer a reduced range of financial services which would be simpler to operate, giving these institutions different status from old-style banks, and therefore fewer obligations in terms of operating rules (for example capital, accounting rules and supervision).

- Increased competition in the banking sector is required, with the aim of reducing banking costs, and not just for poor households. Given the reduced size of the market in developing countries, increasing the number of national banks is probably not possible. Increased competition should be based on sector regulation and opening the market to foreign banks, and this opening should be gradual enough that national banks are not jeopardised.

Increased competition is likely to encourage diversification of the range of investment products offered in the national financial sector. Such diversification is essential in order to keep savings from high-income households in the country. Particular effort must be made to simplify and reduce the costs of international transfers, which should enable channelling of money received from emigrant workers in industrial countries into banks. As already outlined, given the large amount of such transfers, the increase in available savings (after transfer costs) could finance private and public investment, both of which would contribute to achieving the Millennium Development Goals.

Public aid and development agencies have a role to play in extending banking services to households and small and medium-sized businesses: they can provide training in management, underwrite risks and provide capital for microfinance institutions. They can also help reduce costs (which are often exorbitant) for transfers made by emigrant workers to their home country and channel these funds into local banking systems and away from informal circulation.

ii) Guarantee positive remuneration on savings deposits

Maintaining real positive interest rates is an essential condition on mobilising savings. It is therefore necessary to implement liberalisation of interest rates used by banks. In the 1980s, experience in Latin America showed the dangers of sudden liberalisation of the financial system in the context of high inflation. Liberalisation at that point led to excessive rises in real interest rates, an explosion in bank loans, accompanied by excessive levels of private foreign debt. It is possible to offer savers positive remuneration while maintaining a level of control over banks' interest rates and margins.

iii) Reinforce financial literacy

Improvement in the ability of poor households to use bank accounts is dependent on a general literacy drive, and also on specific training in use of bank accounts and the risks associated with the various products available.

iv) Reinforce trust in the formal financial system

Improvements in financial instruments, return on savings and 'familiarity' with bank accounts are not sufficient to guarantee that savings will be mobilised. A highly necessary condition is improving levels of trust in the financial system, using improvements in bank governance (for example: respect for regulations on prudence, and transparency in the rules for granting loans). Furthermore, this trust is often affected by chronic problems in budget management (payment and wage arrears, budget deficits and inflation, trade balances). A mechanism by which deposits could be guaranteed could be useful in promoting banking to poor households, taking care to introduce measures to relieve the problem of banking being something of an unknown quantity.

3.3   Diverting financial savings towards the government

Once an increase in domestic financial saving has been achieved, the second difficulty is to make sure that these savings go towards financing government spending.

3.3-1   Obstacles to channelling savings towards the government

Current difficulties experienced by governments attempting to mobilise savings to help public investment arise from macroeconomic policy, the government of the national financial market and behaviour in terms of debt management. Apart from the factors described above (e.g. budget balance, inflation rate), this trust is often affected by difficulties in budget management (payment and wage arrears, disparity between budgeted expenditure and actual expenditure, and so on) and a lack of budgetary transparency.

Mobilisation of savings for the benefit of the government is constrained by the rudimentary nature of public borrowing, the narrow nature of the national financial market and, often, by an inadequate interest rate policy. In some countries, the government has a repressive financial policy and forces financial institutions to subscribe to public bonds at low interest rates. In the short term, this type of policy facilitates finance of the budget deficit, but it reduces banks' possibility to offer returns on bank deposits, which discourages saving. On the other hand, it sometimes happens that the government (which might fear being unable to finance its deficit) offers its creditors interest rates that are higher than normal market rates (in the private sector), which artificially inflates the cost of servicing its debt and will increase the public deficit. Lebanon and Zambia are examples of such a danger.

3.3-2   Looking for solutions

Directing capital into the public sector must depend on modernisation of financial techniques relating to public borrowing, but also on reform of budget procedures, in four separate ways:

i) Improvement in the operation of the public bond market.

Mobilisation of savings for the benefit of the government is made possible through improvement in the operation of the public bond market. Several complementary aspects must be considered: issue procedures, range and standardisation of bonds, training of specialist public bond agents, and operation of secondary markets. This is also an area in which aid agencies could offer support in the form of technical assistance and training programmes.

However, financial instruments suitable for increasing government resources vary according to whether the government makes more use of active seigniorage than of borrowing. When inflation is high, the government must offer bonds that guarantee a real return to savers, offering bonds indexed to inflation or exchange rate guarantees (particularly in dollarised economies such as Laos and Cambodia). Issue of indexed bonds enabled reductions in the cost of debt, in a context of deflation that is not usually anticipated. On the other hand, variable interest rates or rates indexed to market rates have the disadvantage that debt servicing is concentrated into years where inflation is high.

ii) Regionalisation of financial markets

For small economies, creation of legally mandated regional markets can alleviate the lack of liquidity in national financial markets, by increasing the number of potential intermediaries and by increasing trust, thanks to the intervention of multinational regulatory bodies.

iii) Devolution of responsibilities

Experience in South Africa reveals some of the possibilities that devolution offers. The South African government calculated that local authorities were best placed to understand the needs of the population. It gave them responsibility for providing basic services such as water, electricity and drainage. By signing a sector charter, which encompasses the banking and financial sector, banks and financial organisations are committed to financing investments that benefit society. Some funding bodies have thus been solicited to lend money to municipal authorities or to open (with banks) lines of refinancing for loans granted to municipal authorities. In order that territorial authorities may fund their investments using borrowing, the government must implement a programme for training local management staff in financial management and contracting, and establish guarantee systems for their loans.

iv) Improvement of budget practices

Trust in public bonds can be reinforced by reform of budget procedures which would enable, firstly, an increase in respect for government spending commitments (reducing salary and supplier payment arrears) and, secondly, improving the reliability of the public accounts. Aid agencies may be able to play an important role in terms of establishing procedures and training government officials.

Conclusion to Chapter 3

The analysis of the resources that could potentially be used to finance a budget deficit, and thus enable an increase in public expenditure which would help meet the Millennium Development Goals, can be broken down into three points:

- Having defined the two sources of domestic finance for a budget deficit, i.e. currency creation and borrowing, the extent and implications of these are outlined. governments' ability to use debt and currency creation can in theory be constrained by institutional factors.

- Debt is likely to cause private investment to go abroad, while seigniorage avoids this. It does, however, involve a significant inflationary risk. These two sources of financing must not go beyond certain limits, because of constraints relating to sustainability of public finances and the search for an optimal level of seigniorage.

- The conditions under which internal finance resources, and particular borrowed resources, can grow may be elicited by outlining the objectives relating to getting savings into banks and channelling these savings towards the government. In order to reduce obstacles to putting savings in banks, four kinds of action are considered. Firstly, it is necessary to extend the range of financial services. Among priority areas are creation of 'basic' bank accounts that are better suited to households with modest resources. An increase in competition in the banking sector could enable improvement in financial products in order to keep savings from high-income households in the country, and to facilitate transfers from emigrant workers. Secondly, gradual liberalisation of interest rates should guarantee positive remuneration for savings deposits. Thirdly, the ability of the poorest households to manage an account ('financial literacy') can be improved using specific training programmes. Fourthly, stronger regulation of the financial system (to respect regulations, introduce transparency in rules by which loans are granted, and so on) is necessary in order to develop a climate of trust in the formal banking system.

Improved channelling of financial savings towards the government could depend on four measures, aimed at improving the attractiveness of public bonds. Firstly, reform of the operation of the public bond market is required, and this must be supported by several complementary measures, for example reform of issue procedures, standardisation of bonds, and training of specialist intermediaries. If inflation increases, the government must offer bonds indexed to inflation. Secondly, creation of regional markets can be a way of reducing the difficulties linked to a lack of liquidity in national financial markets. Thirdly, the devolution of budget responsibilities to local authorities could facilitate channelling of savings into the public sector, as the supply of public services is nearer to local communities.

Finally, improvement of budgetary practices is also necessary in order to reinforce trust in the government.

Annex 3-1: **List of countries that have completely dollarised**

(in chronological order of adoption)

Country	Population (thousands)	Currency used	Since
Andorra	63	Euro (French franc and Spanish peseta before 1999)	1278
Greenland	56	Danish krone	Before 1800
Channel Islands	140	Pound sterling	1797
Pitcairn Islands	0.056	New Zealand dollar and US dollar	19th century
Norfolk Island	2	Australian dollar	Before 1900
Saint Helena	6	Pound sterling	1834
Monaco	30	Euro (French franc between 1865 and 1999)	1999
Tuvalu	10	Australian dollar	1892
San Marino	24	Euro (Italian lira between 1897 and 1999)	1999
Guam	150	US dollar	1898
Puerto Rico	3500	US dollar	1899
American Samoa	60	US dollar	1899
Niue	2	New Zealand dollar	1901
Panama	2500	US dollar, de facto (Balboa plays a symbolic role)	1904
Nauru	8	Australian dollar	1914
US Virgin Islands	100	US dollar	1917
Liechtenstein	31	Swiss franc	1921
Tokelau	1.6	New Zealand dollar	1926
Vatican City	1	Euro (Italian lira between 1929 and 1999)	1999
Kiribati	80	Australian dollar	1943
Marshall Islands	60	US dollar	1944
Northern Mariana Islands	48	US dollar	1944
Micronesia	120	US dollar	1944
Palau	18	US dollar	1944
Cocos Islands	0.6	Australian dollar	1955
Turks and Caicos Islands	14	US dollar	1973
British Virgin Islands	17	US dollar	1973
Northern Cyprus	180	Turkish lira	1974
Cook Islands	18.5	New Zealand dollar	1995
Montenegro	650	Euro (previously Deutschmark)	1999
Ecuador	12900	US dollar	2000
East Timor	?	US dollar	2000
El Salvador	6100	US dollar	2001
Kosovo	2000	Euro	2002

Sources: *Levy Yeyati and Sturzenegger (2000), Bogetiæ (2000), Edwards and Magendzo (2002).*

Annex 3-2: **Summary of obstacles to using banks for saving**

Factors	*Indicators*	*Recommendations*
Supply factors		
Production costs too high to extend supply profitably towards sections of the population without bank accounts.		
Cost of distribution network in rural areas	Bank counters per 1000 inhabitants Average distance to nearest bank	Creation of 'basic' bank accounts at low cost Use of microfinance networks/postal or trade networks Sharing distribution and information networks between stakeholders (competition between various stakeholders)
Scale of production is insufficient	- Minimum deposit amount / minimum salary or average annual income - High cost of financial services	
Banking system lacks competition	- Interest rate spread, creditor/borrower - Cost of international transfers	Increase competition in the banking sector *Facilitate access to the banking sector * Open sector to foreign banks
Regulation of financial sector		
Regulation of banking activities (administration of rates, etc).		Gradual financial liberalisation
Regulation of entry to financial sector - Minimum capital - Accounting standards	Difficulty in creating financial institutions that offer an alternative to classical banks: micro-finance, credit unions	Create different rules (and therefore different obligations) for alternative financial institutions (Arbitrage, with the aim of achieving financial security)
Institutional framework		
The institutional framework is weak - Legal framework - Information network is inadequate	Difficulty recovering debts and enforcing judicial decisions	
Demand factors		
Level of income - Income too low to save		Overall development policy
Level of income Income too low to pay price of (formal) banking services		Proposal for 'basic' banking services
Financial literacy – ability to manage an account		- Literacy - Training in operating bank accounts and financial risks
Suspicion about levels of confidentiality in the banking system (particularly with regard to the tax administration)		
Mistrust in the banking system - Security of investments	- Financial crises happen - Partial dollarisation - Inflation, balance of payments, etc	- Deposit guarantee fund - Regulation of the banking system

<u>Sources</u>: authors

Chapter 4:   Fiscal space and the fight against poverty

Chapters 2 and 3 contained separate analyses of the components of fiscal space in the narrow sense (henceforth NFS). However, in order to be able to release possible increased fiscal space, any analysis must take into account interactions between NFS components, as well as interactions between NFS components and other components of broad fiscal space (i.e. external finance and resources, mobilised using increased effectiveness of public expenditure).

Given the centrality of poverty reduction, the next step is to examine fiscal space as a instrument in the fight against poverty.

1.   Interdependences between the components of broad fiscal space

Plan 4-1 casts light on the main interrelations between the different components[18] of broad fiscal space (BFS). The interactions are as follows:

- The effect of seigniorage, external and internal borrowing, grants and public arrears on tax effort (relation 1 of plan 4-1); effect of tax effort on government revenues (relation 2);

- Effect of poverty and growth on tax effort (relation 3) and on the level of government revenues (relation 4);

- Effect of increased effectiveness of public expenditure on supply of public goods and services (relation 5); effect of supply of public goods and services on tax compliance (relation 6) and effect of tax compliance on government revenues (relation 7);

- Effect of currency availability from grants and external borrowing, which offsets problems caused by the balance of payments (relation 8) and facilitates importation of goods and services (relation 9), thus improving supply of public goods and services.

Plan 4-1 shows that improvement in supply of public goods and services enables both stimulation of growth and reduction of poverty (relations 10, 11 and 12). Poverty reduction enables tax effort and government revenues to be increased. Its effect is to improve supplies of public goods, which then enables additional poverty reduction.

---

[18] <u>NB</u>: In plan 4-1, the various components of fiscal space are each represented by a rectangle.
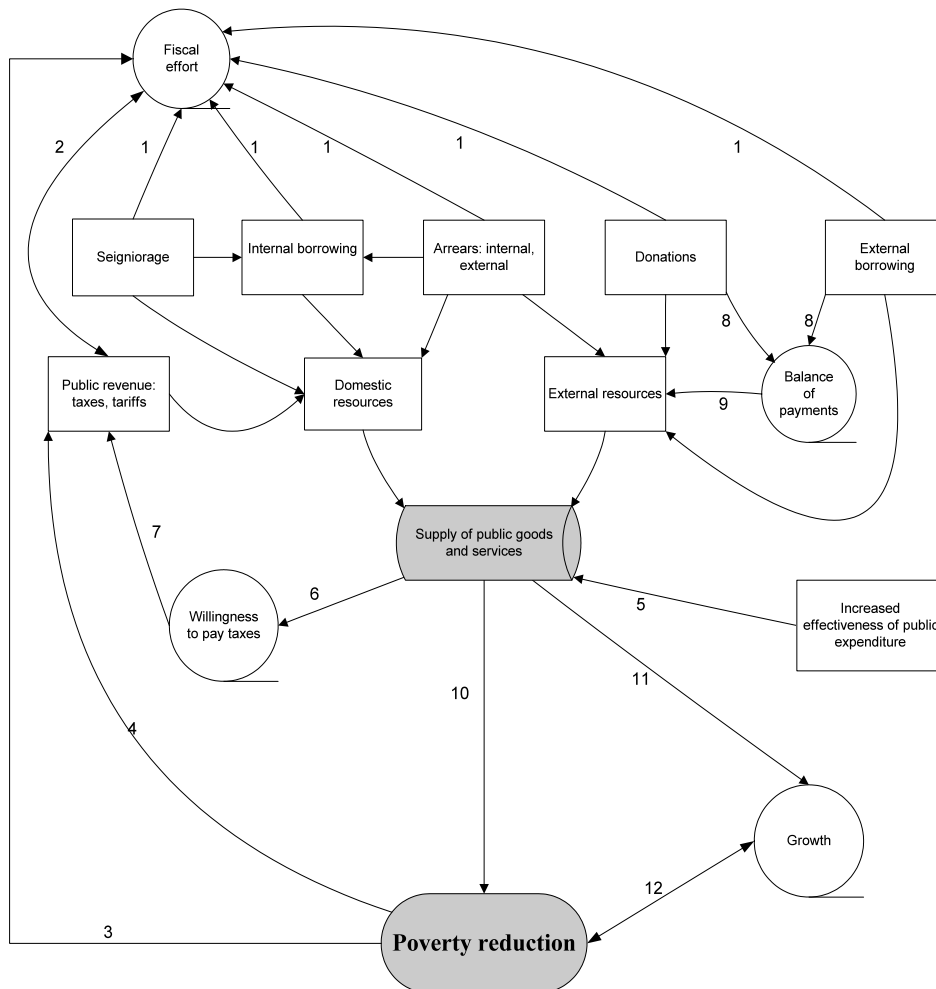
Sources: authors' construction.

Other circles, both virtuous and vicious, can be highlighted:

- Greater effectiveness of public expenditure, owing, for example, to devolution or decentralisation of decisions (see chapters 3 and 4), is likely to improve general tax compliance. This increased willingness causes, in turn, an increase in government revenues as tax fraud is noticeably reduced. Additional resources then enable increased supply of public goods and services, which further strengthens tax compliance.

- Excessive use of borrowing will momentarily increase available resources, and enables public expenditure to increase. However, apart from the negative effect that borrowing has on household consumption patterns (see chapter 3), it can also affect tax effort, which in turn alters government revenues, which leads to the government borrowing more in order to compensate for this fall in resources.

Finally, this analysis of overall BFS takes the opportunity to emphasise the role played by institutional and political factors. Analysis of conditions in which different components of fiscal space are used involves understanding the relationships between various economic and political institutions (Acemoglu, Johnson and Robinson, 2004). It is then possible to give a better evaluation of the effects of mobilisation of various components of fiscal space on poverty reduction.

1.1   Taxes and financing resources

1.1-1   Financing resources and government revenues

Does financing a deficit stabilise fiscal space resources?

Plan 4-1 gives a dynamic view of the relationships between the various components of fiscal space. From this figure, it is possible to identify the conditions under which an optimal combination of financial resources and taxes is achieved.

Whatever measures they adopt in order to reduce volatility in government revenues (see Chapter 2), many developing countries, particularly those whose income depends largely on exports of primary products (agricultural or mining) will continue to suffer considerable volatility in government revenues. This vulnerability to world markets can be limited by the creation of a budget stabilisation fund (for example FEP, the Fondo de Estabilizacion Petrola in Ecuador).

One justification of borrowing refers to the tax 'smoothing effect' (Barro 1979). Borrowed resources enable compensation to be made for a fall in tax resources and thus economically and socially costly arbitrage between various expenditure categories is avoided. Similarly, a temporary increase in public expenditure, resulting from an exogenous event, e.g. climatic or political, means that financial resources have to be used. A solution consisting of temporarily increasing government revenues ratios is not optimal if the distortions (or inefficiencies) caused by taxation increase out of proportion to government revenues ratios (increases and convex function of the taxation rate). It is therefore preferable to have alternative resources to fall back on. Increasing taxation rates is only justified if there is a permanent increase in public expenditure, in order to fulfil budgetary requirements. In other words, borrowed resources enable smoothing of taxation rates over time.

The 'financing' component of fiscal space in the broad sense (internal financial resources, in addition to external borrowing and grants) must ensure a certain level of stability in domestic government revenues. This stabilisation process, when it exists, acts either directly, through contra-cyclic debt, or indirectly, through stabilisation of economic activity, which in the end will reduce volatility in government revenues.

However, the stabilising or destabilising effects of various components of fiscal space have not been studied in depth. Some elements of fiscal space, such as arrears or external borrowing[19], seem to have a destabilising effect, but it is not clear whether other elements

---

[19] A steep fall (or devaluation) in interest rates can cause a large increase in currency debt.

always have a stabilising effect. The stabilising function of aid (for example) remains subject to debate (Buhir and Hamann, 2001). These effects are all the more complex because external financial contributions have different effects, according to their type, on levels of domestic government revenues (Gupta et al. 2003). Studies of specific countries must therefore examine the stabilising or destabilising effect of each component of BFS. This analysis will provide initial assessment criteria for optimal composition of fiscal space.

Deficit financing, fiscal space and growth

What macroeconomic impact does a budget deficit policy have?

In Keynesian theory, that is, in an environment characterised, for private entities, by liquidity constraints, public borrowing contributes to stabilisation of effective demand. In a period where activity levels are falling, public expenditure financed by debt is a substitute for private expenditure. During a period of economic expansion, the optimal behaviour by the Government is to operate a budget surplus. It has been shown that well-being does not just depend on expenditure levels, but also on expenditure stability. Borrowing also plays a role in stabilisation of activity, and enables the effects of the economic cycle to be diminished.

In the overall macroeconomic sphere, using borrowing (internal or external) or grants enables macroeconomic stabilisation. However, this assertion, which is defended by Keynesian economists, has always been challenged by classical economists, who are not in favour of deficits that potentially lead to crowding out effects and capital outflows (see Chapter 3). This traditional opposition between Keynesian and neo-classical economists now seems outdated. Recent work, such as Alesina and Perotti (1995), has established that the macroeconomic impact of deficits is responsive to the initial situation in the public finances, as approximated by the level of debt.

- A policy of increasing public debt, when debt levels are already high, can lead to economic recession, with capital leaving the country. Economic agents will judge the budgetary policy to be unsustainable. They may anticipate a drastic increase in taxation, and will react by lowering their expenditure (Combes, Ary Tanimoune, Plane 2005). It is therefore possible, in some situations, that net absorption will diminish, causing economic recession. Economic agents, particularly investors, might also predict serious macroeconomic distorsions and decide against investing.

- In a situation where debt levels are low, a policy of borrowing can have positive macroeconomic effects, as agents anticipate tax increases far in the future, that will affect future generations. They will therefore not reduce consumption to the same degree as they otherwise would have (Sutherland 1997). Increasing public debt therefore has a stimulating effect (Keynesian effect). There is therefore a psychological debt threshold, beyond which non-Keynesian effects win out over Keynesian effects. A reasonable level of debt can have a positive effect on economic activity and investors.

Country-case studies must assess to what extent debt is likely to have favourable macroeconomic effects, particularly on growth, and therefore how far it enables easier mobilisation of government revenues.

1.1-2   Deficit financing, inflation and government revenues

As demonstrated above (Chapter 3, § 1.2-3), excessive public debt and use of certain types of financing lead to inflation phenomena, which block mobilisation of government revenues (Keynes-Oliveira-Tanzi effect). Vulnerability of government revenues to inflation does vary according to the tax system (various combinations of taxation types are more or less sensitive to inflation). This vulnerability is also partially determined by the way the tax is administered (whether all tax is collected at source, and the length of time taken to recover payments).

When a country has experienced periods of high inflation, it is useful to study the impact of these episodes on mobilisation of government revenues.

1.1-3   Arrears and government revenues

Accumulation of public arrears is a widespread phenomenon. Particularly in Sub-Saharan Africa, institutional limitations to monetary financing of a deficit (in the franc zone, and Djibouti) seem to increase the accumulation of arrears, which represent major obstacles to paying off the deficit using monetary financing.

These arrears, which tend to accumulate in large amounts during crises, are not usually reliably quantified (see Chapter 3). Arrears are accumulated with government suppliers or employees, and sometimes lead to serious problems in the banking system (where there is a risk of a chain of bank failures).

Accumulation of arrears means that several components of BFS are limited. First, in government revenues, accumulation of arrears with taxpayers, particularly in the form of VAT credits, is frequently responsible for 'savage' offsetting of debts: taxpayers refuse to pay taxes owing, as they claim that there are unpaid debts. This has a direct effect on revenue from taxation, which can affect the whole tax system. Apart from this, accumulation of arrears holds back economic growth and, clearly, is an indirect obstacle to mobilising government revenues. Moreover, accumulation of public arrears wears down the Government's credibility and reduces economic growth, and has an adverse effect on the supply of various categories of deficit financing, and thus affects another component of fiscal space. Finally, accumulation of public arrears is responsible for increases in the cost of supplies to the government, as government suppliers seek to cover themselves against the risk of non-payment. This increase in costs reduces the effectiveness of public expenditure.

The impact of accumulation of public arrears on the various components of fiscal space needs to be analysed for specific countries. It would also be useful to offer solutions, particularly institutional solutions, in order to avoid accumulation of arrears.

1.2 Inter-relationship between resources and public expenditure

Considerable efforts have been made over many years to improve the quality of public expenditure. Considerable progress remains possible, particularly in the poorest countries which generally do not have sufficient capacity to manage public expenditure. Such advances in the effectiveness of public expenditure are in themselves ways of broadening BFS. As plan 4-1 illustrates (relations 5 and 6), effectiveness of public expenditure affects tax compliance and therefore levels of domestic government revenue.

1.2-1 Public expenditure and mobilisation of government revenues

Although this relationship has not been closely analysed, quality of public expenditure is certainly an important factor in mobilisation of the various components of fiscal space.

Only effective public expenditure, which has a positive effect in terms of poverty reduction (and also in terms of growth) can justify government revenueswhich, taken on its own, has a negative effect on living standards and growth; an effect that increases as levels of fiscal distortion rise (Gunning 2004; Brun, Chambas and Combes 1998). More effective public expenditure contributes to an improved ability to draw on additional government revenues. In this respect, it would be particularly useful to be able to quantify the effect of more effective expenditure on the tax compliance.

In order to have a better supply of public goods, a government can seek to improve the effectiveness of its public expenditure. The government thus succeeds in enlarging its fiscal space in the broad sense, not by mobilising additional resources, but by freeing up resources by making public expenditure more effective (see plan 4-2).

Graph 4-2: impact of quality of tax payment system and the effectiveness of expenditure on payment levels.
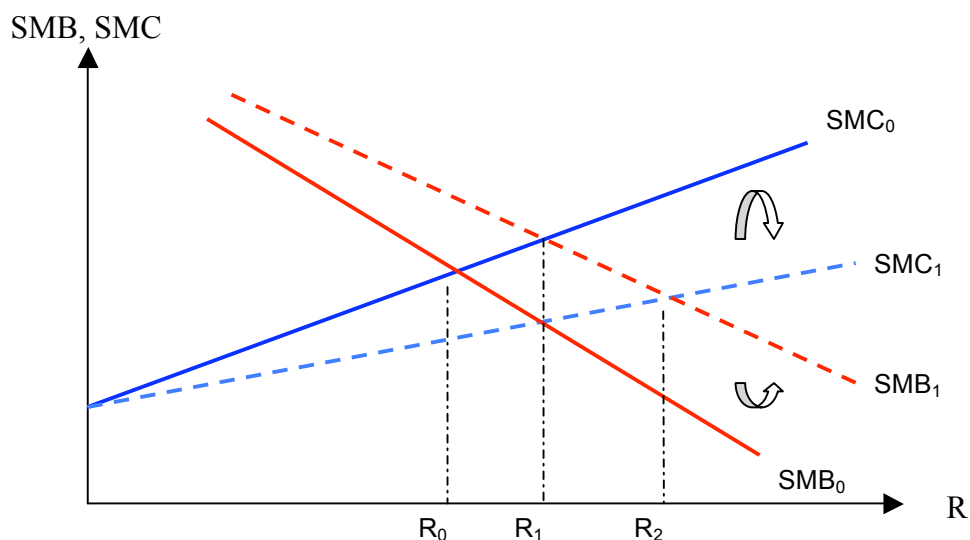
In graph 4-2, budgetary revenue (R) is represented on the horizontal axis (by hypothesis, expenditure is equal to revenue; R therefore represents the amount of expenditure). On the vertical axis, SMB and SMC represent respectively the marginal social benefit of public expenditure and the marginal social cost of revenue. The marginal benefit curve has a downward slope corresponding to the fact that the more effective expenditure is done first. The marginal cost curve slopes upward. Marginal cost is determined by level of revenue and also by the deadweight loss that these entail. Where the two curves intersect, marginal cost is equal to marginal benefit and the level of revenue is R_0. At this point, imposing more or less taxation is ineffective.

Is it possible to increase taxation receipts without altering taxation rates? According to this graph, the answer is yes. On the one hand, improvement in the quality of taxation (by reducing deadweight loss) leads to a movement of the cost curve from SMC_0 to SMC_1. Revenue therefore increases from R_0 to R_1. On the other hand, improved expenditure quality moves the marginal benefit curve from SMB_0 to SMB_1, tax compliance is improved and revenue increases from R_0 to R_1. Finally, combined improvements in quality of takings and effectiveness of expenditure cause revenue to increase from R_0 to R_2.

Institutional factors play a major role in effectiveness of public expenditure. This is the case for decentralised expenditure, which consists of delegating some responsibility for managing public goods and services to local government. Local government has better information on the public's needs and wishes than central government, which enables them to adapt the supply of public goods to local needs. Decentralisation should therefore help to increase effectiveness of expenditure, and also people's willingness to pay their taxes. Within a strategy of action against poverty, decentralisation (or devolution of expenditure) fixed at an optimal level, theoretically makes it easier to reach poor people, because there is less distance between government and the governed. Decentralisation should strengthen the position of the disadvantaged in political decision-making.

However, in order to be effective, decentralisation requires a certain level of competition between local authorities or local government bodies. This competition is usually manifested when people vote with their feet, as emphasized by Tiebout (1956). When populations are not free to move from one jurisdiction to another, control is taken by central government in order to ensure that decentralisation is effective. This control, which particularly affects implementation of spending decisions, can be achieved through 'yardstick competition' between different political jurisdictions, as a way of combating poverty and stimulating growth[20].

1.2-2 Public expenditure and financing resources

Quality of public expenditure is partially dependent on flexibility. Often, most expenditure is automatic, for example State's employees' wages or other administrative expenses that are difficult to alter in the short term. Indirectly, an improvement in expenditure quality, when applied to public infrastructure spending, attracts domestic and foreign private investors and funding providers.

---

[20] It is clear that such a method must include initial conditions that are specific to each jurisdiction.

Evaluation of the quality of, and changes in, public expenditure should be carried out. This would enable assessment of the possibility of a significant extension of fiscal space.

2. Fiscal space as an instrument of poverty reduction

The relationship between fiscal space and poverty is twofold. We should first note that high levels of income inequality and, more specifically, high levels of poverty, reduce fiscal space, and we can then see how extension of fiscal space sometimes might increase poverty, even though increases in expenditure are intended to reduce poverty.

2.1 Inequality and poverty: factors in government revenues levels

Among the various factors that explain government revenues levels, the level of development, especially as measured by domestic product per capita, has received a lot of coverage. The following hypothesis, which has been largely neglected in the literature, could also be advanced: that inequality and poverty has had a specific effect on levels of taxation revenue.

Indeed, inequality of income and poverty have an effect on potential (broad) fiscal space. On the one hand, these factors increase demand for redistribution. On the other hand, inequality of income leads to a variety of individual preferences as to which public goods should be funded. These two effects are expressed via the political economy (Brun, Chambas and Combes 2004). Generally, high levels of inequality and a situation of serious poverty, possibly combined with other factors (for example ethnic fragmentation and religious divisions) tend to lead to political instability and the emergence of predatory regimes in which a large proportion of the population, usually the poorest, are exploited by a fortunate minority (Alesina and Perotti 1994). Apart from its negative effect on growth, political instability and associated violence are also factors that lead to refusal to pay taxes (Frey, Stutzer and Benz 2001; Acemoglu and Robinson 2001). Even if revolts and rebellions do not occur, inequality and poverty affect tax compliance and therefore the government's capacity to raise revenue and redistribute wealth.

In highly non-egalitarian countries where there is a great deal of poverty, most taxpayers consider income distribution to be unfair; taxes therefore do not seem to be legitimate, which reduces tax compliance. The more predatory the government (Krueger 1993), and the more it fails in its mission to supply public goods to all, the more taxpayers will attempt to avoid taxes. According to Bayard (1989), tax fraud under such circumstances is 'the only appropriate response to an arbitrary and negligent government'.

The extremely low level of income received by a large group of poor people constitutes an obstacle to mobilisation of government revenue (because of e.g. exemptions and the high cost of levying taxation). Poverty is synonymous with having an income level close to the subsistence threshold. Because of this, taxation, and particularly direct taxation, is very difficult to bear. More generally, in order to escape poverty, poor people try to become involved in unofficial economic activity (Schneider 2003). Despite the development of tax-raising mechanisms that are better matched to the challenge posed by informal activity, high levels of informal activity in the economy, and particularly fraudulent activity, are negative factors in the mobilisation of government revenues (Araujo-Bonjean and Chambas 2005).

2.2   The tax system as an instrument of redistribution

The tax system is traditionally considered, particularly in developed countries, to be an important instrument of equality and thus of redistribution of wealth (Mirrlees, 1971; Piketty, 1997; Bourguignon, 1998). For this reason, many analyses have been done on the effects the tax system has on income distribution.

Box 4-1: Social effects of levying VAT on commodities

Contrary to widely-held opinion, VAT exemptions on tradable commodities, often food products, often places a handicap on local producers: VAT affecting intermediate consumption (processing of the exempt local product) is not deductible and therefore constitutes a fixed cost. Local producers have to bear a double burden of VAT, while imported goods, which are in competition with local goods, do not attract any VAT, as they are exempt. Local producers, particularly farmers, effectively suffer from a negative protectionism, which sometimes drastically reduces their income (Araujo-Bonjean and Chambas, 2005). This negative protectionism, which is due to VAT exemptions, has become intolerable for two main reasons. First, local producers see their tariff protection falling, while tariff protection had previously compensated them for the lack of protection caused by VAT exemptions, and enabled an overall positive protection effect to be achieved. Moreover, in the current globalised world, any distortion of the market in favour of local production stimulates imports of competing goods which are specially adapted to economies with low per-capita income: many African producers (for example rice growers, poultry farmers, candle-makers and soap makers) are victims of this phenomenon.

Consumers, when VAT is levied on commodities, see their real income fall as consumer prices rise. For tradable commodities, being liable for VAT entails price increases on imports that are equal to the rate of VAT. For tradable products, it can be assumed that import price, inclusive of VAT, determines the domestic consumer price. Processed goods that were previously exempted, such as bread or other food products that are not imported as final product, undergo lesser price increases, as being liable for VAT enables duplications caused by successive applications of VAT to be eliminated. VAT liability entails an increase in consumer prices, and disadvantaged consumers can fall into poverty. From a socio-political point of view, it is essential to obtain a detailed evaluation of the impact of reform, and to plan compensation mechanisms for disadvantaged groups.

Producers. At the very least, producers of agricultural products and commodities are no longer handicapped by VAT exemption, and, unless another part of the production process captures the advantage, producers' income should increase. For some local industries whose products are not subject to VAT (food products that are markets by bodies not liable for VAT), there is a strong advantage. From this point of view, extension of the VAT base to food goods should reduce poverty noticeably, as in most developing countries poverty primarily affects agricultural producers, the vast majority of whom are not subject to VAT and who are not meant to become subject to it.

Effects on levels of government revenues. In so far as public expenditure is managed effectively and enables a real reduction in poverty, maintenance of the level of government revenues, and therefore of supply of public goods, is socially desirable. Moreover, an excessive increase in budget deficit can entail effects (for example inflation and accumulated arrears) that are damaging to the most disadvantaged groups. Finally, if we restrict our sights to VAT, higher gross takings of this tax should promote proper operation of VAT refunds, which would be necessary in order to ensure that VAT is economically neutral: good income from VAT is also conducive to a moderate rate of VAT.

These analyses are made very complex by the fact that, in many countries, extensive exemptions and special regimes are granted. Exemptions granted for social reasons, and to create economic incentives, often follow a similar pattern to exemptions set up for reasons of protection using tariffs. They undermine the government revenues component of fiscal space, and it is still impossible to show that the stated aims have been met. Sectors such as manufacturing, property and services benefit from considerable tax privileges in various countries. These special measures often tend to exacerbate the effect whereby resources are diverted into private incomes, with no perceptible benefit for poorer sections of society.

In the event that a strategy for increasing levels of government revenues is adopted, what effect would such an increase have on fiscal pressure on poor people and on inequality in general? In this respect, it would be particularly useful to concentrate analysis on VAT (see box 4-1), which is currently the central tax in tax transition (see Chapter 2). It would also be important to give an assessment of direct taxation, and particularly income and property taxes.

Like any reform, tax transition is an opportunity to identify the most effective and equitable form of taxation. It is therefore particularly useful to identify the kind of taxation, the tax base and government revenues ratios are likely to produce double dividends (any compulsory taxation involves fiscal resources (first dividend) and also has an incentive effect (second dividend) which alters production and consumption behaviour patterns). It is therefore useful to identify, for example, which type of tax is helpful to the poorest groups. To achieve this, poverty must be rigorously defined and understood in all its forms, as far as possible.

Finally, for any analysis of the composition of fiscal space in a specific country, it is essential to study its special tax measures. Particularly, assessment should be made of the level of resources it would be possible to release via reduction of special tax measures, without introducing negative effects for the relevant economic activities. In some cases, it may be necessary to take into account tax competition phenomena.

2.3   Debt, redistribution and poverty

When debt is substituted for taxes[21], the tax burden is placed on future generations.

As a project enables future benefits (roads, schools, hospital etc), debt financing is legitimate, as it spreads the burden of investment over all the generations that will benefit from the infrastructure[22]. This is an application of the 'pay-as-you-profit" principle, which is equivalent to the condition explained by Bowen, Lindhal and Samuelson, which described production of the optimal level of public goods, in Pareto's sense.

The analysis by Rawls (1971) in terms of 'maximin' is an indispensable reference. According to this social justice criterion, a planner must attach supreme importance to the well-being of the least favoured generation. If future generations, because of growth, have a better standard of living than the current generation, then it is legitimate to resort to borrowing. *All other things being equal*, future generations must contribute more, applying the 'he who can, pays' principle.

---

[21] For many countries, particularly in sub-Saharan Africa, external debt is entered into at rates that are lower than market rates. Concessional loans are part of aid, and the cheapest form of aid is grants. It should be noted that, in the aid sector, substitution of loans (even at favourable rates) for grants involves costs that countries will have to face in the future.

[22] As long as the lifetime of the infrastructure has been correctly estimated.

However, if borrowing becomes excessive, it has a negative effect on the sustainability of public finances. For this reason, it leads to deterioration in fiscal space, which risks, in the end, reducing the well-being of future generations. The gains associated with growth no longer compensate for the losses resulting from debt.

Finally, from the point of view of the public finances, a sustainable balance is obtained if expenditure financed by borrowing generates government revenues that are sufficient to cover the costs of borrowing.

For each country being studied, it is useful to assess how far the borrowing strategy is equitable to successive generations. Examination should also be made of whether the debt financing strategy is likely to worsen budgetary distorsions in the medium and long term. It is useful to consider whether the borrowing policy is sustainable.

2.4   Seigniorage, inflation tax and poverty

Seigniorage due to economic growth obviously has no negative effect on poor people. This is not the case for financing public expenditure using currency creation, if this causes inflation. Certainly the inflation tax, like any tax and unlike borrowing, does not burden future generations with today's public expenditure. But it is undoubtedly worse than borrowing from the point of view of fairness. As we have already noted (Chapter 3), the inflation tax has a disproportionate effect on poor populations when compared to rich groups, in terms of income and assets. Moreover, in so far as it can reduce the real value of taxes (Keynes Oliveira Tanzi effect), it has a disproportionately small effect on high-earning taxpayers.

Conclusion to Chapter 4

Statement

Fiscal space should have the ultimate aim of helping the fight against poverty. It can only contribute action against poverty if there is good knowledge of the interactions between the various components of narrow fiscal space (government revenues and internal financing resources) and also interaction between these components and broad fiscal space (external finance and resources mobilised by improved effectiveness in public expenditure).

A schematic representation of fiscal space casts light on the following major relationships:

- Seigniorage, external and internal borrowing, as well as grants and public arrears have an effect on tax effort, which partially determines levels of government revenue.

- Poverty and economic growth have an impact on tax effort and on the level of government revenue.

- Improved public expenditure effectiveness improves tax compliance, via improved supply of public goods and services; tax compliance has a positive effect on government revenue.

- Availability of liquidity, through grants and external borrowing, lessens obstacles to external payments, facilitates importation of goods and services and improves supply of public goods and services.

Quality of public expenditure is likely to contribute to extending fiscal space. Reinforced expenditure (in terms of quantity and quality) enhances, in turn, tax compliance and increases the country's attractiveness to international investors. A similar effect, promoting extension of fiscal space, can be expected following improvements to the tax administration system.

Fiscal space is an important instrument in the fight against poverty. It has a twofold relationship with poverty.

Thus, high levels of poverty, and also inequality, reduce fiscal space. Conversely, the various components of fiscal space are also instruments of redistribution and act to combat poverty.

Trends

Fiscal space can be modified according to whether the method of financing public deficits has a stabilising effect on resources that create fiscal space: The 'financing' component of fiscal space in the broad sense (internal financial resources, in addition to external borrowing and grants) must enable stabilisation, and thus reinforcement, of fiscal space in the broad sense.

The macroeconomic effect of a debt-based strategy, particularly in terms of growth, is heavily dependent on the initial level of debt (the lower the initial level of debt, the more likely it is that an effect that favours growth will occur). Higher economic growth generally has a positive effect on poverty reduction: it also tends to improve the sustainability of the public finances (it has a directly positive effect on government revenues, and also the ratio of public debt).

An excessive inflation tax hinders mobilisation of government revenues. Public arrears are always a factor that slows down mobilisation of these resources. By undermining mobilisation of government revenues, the inflation tax and public arrears prevent public finances from playing their full role in the action against poverty. Moreover, inflation due to excessive seigniorage has a negative effect on poor people.

Resources can be freed up by decentralising management of public expenditure, which, in an optimal institutional framework, enables increased effectiveness of public expenditure.

The redistribution effects produced by mobilisation of various components of fiscal space, particularly the government revenues component, are complex phenomena and poorly understood. Analyses of specific countries are necessary in order to end this uncertainty.

References

Acemoglu D., Johnson S. and J.A. Robinson, 2004, "Institutions as the Fundamental Cause of Long-Run Growth", *NBER Working Papers* 10481.

Acemoglu D., Robinson, J.A. and T. Verdier, 2003, "Kleptocracy and Divide-and-Rule: A Model of Personal Rule", *NBER Working Papers* 10136.

Acemoglu D. and J.A. Robinson, 2001, "A Theory of Political Transitions", *American Economic Review*, 91(4), 938-963.

Adam C. S. and S. O'Connell, 1999 "Aid, Taxation and Development in Sub-Saharan Africa", *Economics and Politics,* 11(3), 225-253.

Agbeyegbe T., Stotsky J. and A. Wolde Mariam., 2004, "Trade Liberalization, Exchange Rate Changes and Government revenue in Sub-Saharan Africa", *IMF Working Paper*, 04/178.

Alesina A. and R. Perotti, 1994, "The Political Economy of Growth: A Critical Survey of the Recent Literature", *World Bank Economic Review*, 8(3), 351-371.

Alesina A. and R. Perotti, 1995, "Fiscal Expansions and Adjustments in OECD Countries", *Economic Policy*, 21, 207-247.

Araujo Bonjean C. and G. Chambas, 2005, "Taxing the Urban Unrecorded Sector in Sub-Saharan Africa" in Alm J., Martinez-Vasquez J. (eds.) *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, Elsevier.

Atkinson A.B. 1987, "On the Measurement of Poverty", *Econometrica,* 55(4), 749-764.

Azariadis C. and J. Stachurski, 2005, "Poverty Traps", in P. Aghion et S. Durlauf (eds.), *Handbook of Economic Growth*, Elsevier, 295-384.

Banque de France, 2004, *Rapport Annuel de la Zone Franc*.

Banque Mondiale, 2004, *Ecuador : Creating Fiscal Space for Poverty Reduction, Fiscal Management and Public Expenditure Review,* The World bank, Washington DC.

Banque Mondiale, 2005, *Global Monitoring Report*, ESKA.

Barro R., 1979, "On the Determination of the Public Debt", *Journal of Political Economy*, 87(5), 940-971.

Baunsgaard T. and M. Keen, 2005, "Government revenue and (or?) Trade Liberalization", in IMF, FAD, Draft.

Bayart J.-F., 1989, *L'Etat et l'Afrique. La politique du ventre*, Fayard, Paris.

Berg A., A.O. Krueger, 2003, "Trade, Growth and Poverty: A Selective Survey" *IMF Working Paper 03/30.*

Bird R.M., 2003, "Managing Tax Reform", *Bulletin for International Fiscal Documentation*, 58, 42-55.

Bird R.M., Casanegra De and Jantscher M., 1992 Improving Tax Administration in Developing Countries. IMF, Washington.

Bird R.M., Martinez-Vazquez J. and B. Torgler, 2005, "Societal Institutions and Tax Effort in Developing Countries", *Working Paper,* Georgia Government University, 04-06.

Bleaney Y.M., Gemmel N. and D. Greenaway, 1995 "Government revenue Volatility, with Particular Reference to Sub-Saharan Africa", *The Journal of Development Studies*, 31(6), 883-902.

Bogetić Z., 2000, "Official Dollarization: Current Experiences and Issues", *Cato Journal*, 20(2), 179-213.

Bourguignon F., 1998, *Fiscalité et redistribution*, Conseil d'Analyse Economique et Social, La Documentation Française.

Brixi H.P., Valenduc C. and Z. L. Swift, 2004, *Tax Expenditures: Shedding Light on Government Spending through the Tax System, Lessons from Developed and Transition Countries*, World Bank.

Brun J.F., Chambas G. and J.L. Combes, 1998, "La réduction des inégalités pour une meilleure mobilisation fiscale", in *Afrique au Sud du Sahara: Mobiliser des ressources fiscales pour le développement*, Chapitre 2, Chambas G. (dir.), Economica, 2005, p. 21-38.

Brun J.F., Chambas G. and J.L. Combes, 1998, "La politique fiscale agit-elle sur la croissance?", *Revue d'Economie du Développement*, n° 2, 115-125.

Bruno M. and S. Fischer, 1990, "Seignorage, Operating Rules, and the High Inflation Rate", *Quarterly Journal of Economics*, 100, 353-374.

Bulir A. and J. Hamann, 2003, "Aid Volatility: An Empirical Assessment", *IMF Staff Papers*, 50(1), 64-89.

Cagan P., 1956, "The Monetary Dynamics of Hyperinflation", in *Studies in the Quantity Theory of Money*, M. Friedman (ed.), Chicago University Press, Chicago.

Chambas G. (ed.) 2005, *Afrique au Sud du Sahara. Mobiliser des ressources fiscales pour le développement*. Economica, Paris.

Claessens S., 2005, "Access to Financial services: A Review of the Issues and Public Policy Objectives", PRWP 3589, May.

Collier P., 2000, "How to Reduce Corruption", *African Development Review*, 12(2), 191-205

Collier P, A. Hoeffler and C. Pattillo, 2004, "Africa's Exodus: Capital Flight and the Brain Drain as Portfolio Decisions", *Journal of African Economies*, 13(2), 15-54.

Collier, P. and J.W. Gunning, *Trade Shocks in Developing Countries*, Vol. 1, Oxford University Press.

Combes J.-L. and T. Saadi-Sedik, 2006, "How Does Trade Openness Influence Budget Deficits in Developing Countries? ", *Journal of Development Studies*, forthcoming.

Craig J., and W. Allan, 2001, *Fiscal Transparency, Tax Expenditures, and Budget Processes: International Perspective*, IMF.

De Nicoló G., P. Honohan and A. Ize, 2003, "Dollarization of the Banking System: Good or Bad?", *World Bank Policy Research Working Paper* 3116.

Deaton A. and G. Laroque, 2001, "Housing, Land Prices and Growth", *Journal of Economic Growth*, 6(2), 87-105.

Devarajan S., Swaroop V. and H.F. Zou, 1996, "The Composition of Public Expenditure and Economic Growth", *Journal of Monetary Economics*, 37(2), 313-344.

Dollar D. et A. Kraay, 2001, "Growth is Good for the Poor", *Policy Research Working Paper* 2587, World Bank.

Dornbusch R., F. Sturzenegger and H. Wolf, 1990, "Extreme Inflation: Dynamics and Stabilization", *Brookings Papers on Economic Activity*, 1, 1-84.

Easterly W., 2005, "Reliving the 50s: the Big Push, Poverty traps, and Takeoffs in Economic Development", *Center for Global Development Working Paper* 65.

Ebrill L., Keen M., Bodin J.P. and V. Summers, 2001, *The Modern VAT*, IMF.

Edwards S. and I. Magendzo, 2002, "Dollarization and Economic Performance: What Do We Really Know?", *Österreichische Nationalbank Working Paper* 65.

Emran M.S. and J.E. Stiglitz, 2005, "On Selective Indirect Tax Reform in Developing Countries", *Journal of Public Economics*, 89(4), 599-623.

Fischer S., 1982, "Seigniorage and the Case for National Money", *Journal of Political Economy*, 90(2), 295-313.

FMI, 2003, *Deflation: Determinants, Risks and Policy Options- Findings of an Interdepartmental Task Force,* April 30, Washington, DC.

Frey B.S., Stutzer A. and Benz M., 2001, "Trusting Constitutions", *Economie Publique*, 7.

Frey B.S., 1997, *Not Just for the Money. An Economic Theory of Personal Motivation*, Cheltenham, UK, Edward Elgar Publishing.

Gastambide A., 2005, *Dollarisation partielle et dollarisation intégrale: l'expérience de l'Equateur*, Doctoral thesis, Université d'Auvergne, CERDI.

Ghura D., 1998, "Government revenue in Sub-Saharan Africa: Effects of Economic Policy and Corruption", *IMF Working Paper* 98/135.

Gollier C. and J.W. Pratt, 1996, "Risk Vulnerability and the Tempering Effect of Background Risk", *Econometrica*, 64(5), 1109-1123.

Guillaumont Jeanneney S., 1998, *Monnaie et finances,* Thémis, Presses Universitaires de France, Paris.

Guillaumont Jeanneney S. and K. Kpodar (2005), "Développement financier, instabilité financière et réduction de la pauvreté", in *Le Développement face à la Pauvreté*, Plane P., Decaluwe B., Diaw A., Mourji F. (eds), forthcoming.

Guillaumont Jeanneney S., 1994, "La politique économique en présence de substitution de monnaies", Allocution présidentielle au XLIIe Congrès annuel de l'AFSE, sept. 1993, *Revue Economique*, 349-368.

Gunning J. W., 2004, "Why Give Aid" Paper for the AFD-EUDN Conference *Development Aid: Why and How?,* Paris, November 25th.

Gupta S., B. Clements, A. Pivovarsky et E. Tiongson, 2003, "Foreign Aid and Revenue Response: Does the Composition of Aid Matter?", *IMF Working Paper* 03/176.

Heller P., 2005, "Understanding Fiscal Space", *IMF Discussion Paper* 05/4.

Kaminsky G. L. and C.M. Reinhart, 1996, "The Twin Crisis: the Causes of Banking and Balance of Payments Problems", *International Finance Discussion Paper* 544, Board of Governors of the Federal Reserve US.

Khattry B. and M. Rao, 2002 , "Fiscal Faux Pas? An Analysis of the Revenue Implications of Trade Liberalization", *World Development*, 30(8), 1431-1444.

Krueger A.O., 1993, *Political Economy of Policy Reform in Developing Countries*, MIT Press.

Krueger A.O., 1997, "Trade Policy and Economic Development: How We Learn?", *American Economic Review*, 87(1), 1-22.

Levy Yeyati E. and F. Sturzenegger, 2000, "Dollarization: A Primer", in Levy Yeyati E. et F. Sturzenegger (eds.), *Dollarization: Debates and Policy Alternatives*, Cambridge, MIT Press p.1-52.

Mac Kinnon R.I., 1973, *Money and Capital in Economic Development*, Washington, The Brooking Institution.

Mankiw G., 1987, "The Optimal Collection of Seigniorage: Theory and Evidence", *Journal of Monetary Economics*, 20(2), 327-341.

Mirrlees J., 1971, "An Exploration in the Theory of Optimal Income Taxation", *Review of Economic Studies*, 38, 175-208.

North D., 1990, *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, New York.

Persson T. and L.E.O. Svensson, 1989, "Why a Stubborn Conservative Would Run a Deficit: Policy with Time-Inconsistent Preferences", *Quarterly Journal of Economics*, 104, 325-345.

Piketty T., 1997, *L'économie des inégalités*, La Découverte, Paris.

Rao J. M. and Khattry B. 2003 "Revenue Mobilisation: Loosening the Fiscal Constraint" in McKinley T. (ed.) *The Macroeconomic of Poverty Reduction in Indonesia,* UNDP.

Ramsey, R. 1927, "A Contribution to the Theory of Taxation", *Economic Journal*, 37, 47-61.

Rawls J., 1971, *A Theory of Justice*, Harvard University Press.

Roy R. and J. Weeks, 2004, "Making Fiscal Policy Work for the Poor", PNUD.

Saadi Sedik, T., 2004, *Déficits budgétaires, seigneuriage et croissance économique dans les pays en développement*. Doctoral thesis, Université d'Auvergne, CERDI.

Sachs J.D., J.W. McArthur, G. Schmidt-Traub, M. Kruk, C. Bahadur, M. Faye and G. McCord, 2004, "Ending Africa's Poverty Trap", *Brookings Papers on Economic Activity*, 1, 117-238.

Schneider F., 2003, "The Size and Development of the Shadow Economy Around the World and The relation to the Hard to Tax", Hard to Tax Conference, Atlanta.

Sen A., 1999, *Une nouveau modèle économique : Développement, justice, liberté*, Odile Jacob, Paris.

Shaw E.S., 1973, *Financial Deepening in Economic Development*, Oxford University Press, New-York.

Stiglitz J. E., 2003, "Development Oriented Tax Policy", *Paper for the International Ck Name*, Prague, August 24.

Stosky J.G. et A. WoldeMariam, 1997, "Tax Effort in Sub-Saharan Africa", *IMF Working Paper* 97/107.

Sutherland A., 1997, "Fiscal Crisis and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?", *Journal of Public Economics*, 65(2), 147-162.

Tiebout C. M., 1956, "A Pure Theory of Local Public Economics", *Journal of Political Economy*, 64(5), 416-424.

Toye J., 2000, "Fiscal Crisis and Tax reform in Developing Countries", *Cambridge Journal of Economics*, 24(1), 21-44.

United Nations, 2002 "Report of the International Conference on Financing for Development Monterrey" Mexico, 18-22 March.

World Bank, 2003, *World Development Report. Making Services Work for Poor People*, World Bank, Oxford University Press.

List of Tables

Table of Contents

References

Acemoglu D., Johnson S. and J.A. Robinson, 2004, "Institutions as the Fundamental Cause of Long-Run Growth", *NBER Working Papers* 10481.

Acemoglu D., Robinson, J.A. and T. Verdier, 2003, "Kleptocracy and Divide-and-Rule: A Model of Personal Rule", *NBER Working Papers* 10136.

Acemoglu D. and J.A. Robinson, 2001, "A Theory of Political Transitions", *American Economic Review*, 91(4), 938-963.

Adam C. S. and S. O'Connell, 1999 "Aid, Taxation and Development in Sub-Saharan Africa", *Economics and Politics,* 11(3), 225-253.

Agbeyegbe T., Stotsky J. and A. Wolde Mariam., 2004, "Trade Liberalization, Exchange Rate Changes and Government revenue in Sub-Saharan Africa", *IMF Working Paper*, 04/178.

Alesina A. and R. Perotti, 1994, "The Political Economy of Growth: A Critical Survey of the Recent Literature", *World Bank Economic Review*, 8(3), 351-371.

Alesina A. and R. Perotti, 1995, "Fiscal Expansions and Adjustments in OECD Countries", *Economic Policy*, 21, 207-247.

Araujo Bonjean C. and G. Chambas, 2005, "Taxing the Urban Unrecorded Sector in Sub-Saharan Africa" in Alm J., Martinez-Vasquez J. (eds.) *Taxing the Hard-to-Tax: Lessons from Theory and Practice*, Elsevier.

Atkinson A.B. 1987, "On the Measurement of Poverty", *Econometrica,* 55(4), 749-764.

Azariadis C. and J. Stachurski, 2005, "Poverty Traps", in P. Aghion et S. Durlauf (eds.), *Handbook of Economic Growth*, Elsevier, 295-384.

Banque de France, 2004, *Rapport Annuel de la Zone Franc*.

Banque Mondiale, 2004, *Ecuador : Creating Fiscal Space for Poverty Reduction, Fiscal Management and Public Expenditure Review,* The World bank, Washington DC.

Banque Mondiale, 2005, *Global Monitoring Report*, ESKA.

Barro R., 1979, "On the Determination of the Public Debt", *Journal of Political Economy*, 87(5), 940-971.

Baunsgaard T. and M. Keen, 2005, "Government revenue and (or?) Trade Liberalization", in IMF, FAD, Draft.

Bayart J.-F., 1989, *L'Etat et l'Afrique. La politique du ventre*, Fayard, Paris.

Berg A., A.O. Krueger, 2003, "Trade, Growth and Poverty: A Selective Survey" *IMF Working Paper 03/30.*

Bird R.M., 2003, "Managing Tax Reform", *Bulletin for International Fiscal Documentation*, 58, 42-55.

Bird R.M., Casanegra De and Jantscher M., 1992 Improving Tax Administration in Developing Countries. IMF, Washington.

Bird R.M., Martinez-Vazquez J. and B. Torgler, 2005, "Societal Institutions and Tax Effort in Developing Countries", *Working Paper,* Georgia Government University, 04-06.

Bleaney Y.M., Gemmel N. and D. Greenaway, 1995 "Government revenue Volatility, with Particular Reference to Sub-Saharan Africa", *The Journal of Development Studies*, 31(6), 883-902.

Bogetić Z., 2000, "Official Dollarization: Current Experiences and Issues", *Cato Journal*, 20(2), 179-213.

Bourguignon F., 1998, *Fiscalité et redistribution*, Conseil d'Analyse Economique et Social, La Documentation Française.

Brixi H.P., Valenduc C. and Z. L. Swift, 2004, *Tax Expenditures: Shedding Light on Government Spending through the Tax System, Lessons from Developed and Transition Countries*, World Bank.

Brun J.F., Chambas G. and J.L. Combes, 1998, "La réduction des inégalités pour une meilleure mobilisation fiscale", in *Afrique au Sud du Sahara: Mobiliser des ressources fiscales pour le développement*, Chapitre 2, Chambas G. (dir.), Economica, 2005, p. 21-38.

Brun J.F., Chambas G. and J.L. Combes, 1998, "La politique fiscale agit-elle sur la croissance?", *Revue d'Economie du Développement*, n° 2, 115-125.

Bruno M. and S. Fischer, 1990, "Seignorage, Operating Rules, and the High Inflation Rate", *Quarterly Journal of Economics*, 100, 353-374.

Bulir A. and J. Hamann, 2003, "Aid Volatility: An Empirical Assessment", *IMF Staff Papers*, 50(1), 64-89.

Cagan P., 1956, "The Monetary Dynamics of Hyperinflation", in *Studies in the Quantity Theory of Money*, M. Friedman (ed.), Chicago University Press, Chicago.

Chambas G. (ed.) 2005, *Afrique au Sud du Sahara. Mobiliser des ressources fiscales pour le développement*. Economica, Paris.

Claessens S., 2005, "Access to Financial services: A Review of the Issues and Public Policy Objectives", PRWP 3589, May.

Collier P., 2000, "How to Reduce Corruption", *African Development Review*, 12(2), 191-205

Collier P, A. Hoeffler and C. Pattillo, 2004, "Africa's Exodus: Capital Flight and the Brain Drain as Portfolio Decisions", *Journal of African Economies*, 13(2), 15-54.

Collier, P. and J.W. Gunning*, Trade Shocks in Developing Countries*, Vol. 1, Oxford University Press.

Combes J.-L. and T. Saadi-Sedik, 2006, "How Does Trade Openness Influence Budget Deficits in Developing Countries? ", *Journal of Development Studies*, forthcoming.

Craig J., and W. Allan, 2001, *Fiscal Transparency, Tax Expenditures, and Budget Processes: International Perspective*, IMF.

De Nicoló G., P. Honohan and A. Ize, 2003, "Dollarization of the Banking System: Good or Bad?", *World Bank Policy Research Working Paper* 3116.

Deaton A. and G. Laroque, 2001, "Housing, Land Prices and Growth", *Journal of Economic Growth*, 6(2), 87-105.

Devarajan S., Swaroop V. and H.F. Zou, 1996, "The Composition of Public Expenditure and Economic Growth", *Journal of Monetary Economics*, 37(2), 313-344.

Dollar D. et A. Kraay, 2001, "Growth is Good for the Poor", *Policy Research Working Paper* 2587, World Bank.

Dornbusch R., F. Sturzenegger and H. Wolf, 1990, "Extreme Inflation: Dynamics and Stabilization", *Brookings Papers on Economic Activity*, 1, 1-84.

Easterly W., 2005, "Reliving the 50s: the Big Push, Poverty traps, and Takeoffs in Economic Development", *Center for Global Development Working Paper* 65.

Ebrill L., Keen M., Bodin J.P. and V. Summers, 2001, *The Modern VAT*, IMF.

Edwards S. and I. Magendzo, 2002, "Dollarization and Economic Performance: What Do We Really Know?", *Österreichische Nationalbank Working Paper* 65.

Emran M.S. and J.E. Stiglitz, 2005, "On Selective Indirect Tax Reform in Developing Countries", *Journal of Public Economics*, 89(4), 599-623.

Fischer S., 1982, "Seigniorage and the Case for National Money", *Journal of Political Economy*, 90(2), 295-313.

FMI, 2003, *Deflation: Determinants, Risks and Policy Options- Findings of an Interdepartmental Task Force,* April 30, Washington, DC.

Frey B.S., Stutzer A. and Benz M., 2001, "Trusting Constitutions", *Economie Publique*, 7.

Frey B.S., 1997, *Not Just for the Money. An Economic Theory of Personal Motivation*, Cheltenham, UK, Edward Elgar Publishing.

Gastambide A., 2005, *Dollarisation partielle et dollarisation intégrale: l'expérience de l'Equateur*, Doctoral thesis, Université d'Auvergne, CERDI.

Ghura D., 1998, "Government revenue in Sub-Saharan Africa: Effects of Economic Policy and Corruption", *IMF Working Paper* 98/135.

Gollier C. and J.W. Pratt, 1996, "Risk Vulnerability and the Tempering Effect of Background Risk", *Econometrica*, 64(5), 1109-1123.

Guillaumont Jeanneney S., 1998, *Monnaie et finances,* Thémis, Presses Universitaires de France, Paris.

Guillaumont Jeanneney S. and K. Kpodar (2005), "Développement financier, instabilité financière et réduction de la pauvreté", in *Le Développement face à la Pauvreté,* Plane P., Decaluwe B., Diaw A., Mourji F. (eds), forthcoming.

Guillaumont Jeanneney S., 1994, "La politique économique en présence de substitution de monnaies", Allocution présidentielle au XLIIe Congrès annuel de l'AFSE, sept. 1993, *Revue Economique*, 349-368.

Gunning J. W., 2004, "Why Give Aid" Paper for the AFD-EUDN Conference *Development Aid: Why and How?,* Paris, November 25th.

Gupta S., B. Clements, A. Pivovarsky et E. Tiongson, 2003, "Foreign Aid and Revenue Response: Does the Composition of Aid Matter?", *IMF Working Paper* 03/176.

Heller P., 2005, "Understanding Fiscal Space", *IMF Discussion Paper* 05/4.

Kaminsky G. L. and C.M. Reinhart, 1996, "The Twin Crisis: the Causes of Banking and Balance of Payments Problems", *International Finance Discussion Paper* 544, Board of Governors of the Federal Reserve US.

Khattry B. and M. Rao, 2002 , "Fiscal Faux Pas? An Analysis of the Revenue Implications of Trade Liberalization", *World Development*, 30(8), 1431-1444.

Krueger A.O., 1993, *Political Economy of Policy Reform in Developing Countries*, MIT Press.

Krueger A.O., 1997, "Trade Policy and Economic Development: How We Learn?", *American Economic Review*, 87(1), 1-22.

Levy Yeyati E. and F. Sturzenegger, 2000, "Dollarization: A Primer", in Levy Yeyati E. et F. Sturzenegger (eds.), *Dollarization: Debates and Policy Alternatives*, Cambridge, MIT Press p.1-52.

Mac Kinnon R.I., 1973, *Money and Capital in Economic Development*, Washington, The Brooking Institution.

Mankiw G., 1987, "The Optimal Collection of Seigniorage: Theory and Evidence", *Journal of Monetary Economics*, 20(2), 327-341.

Mirrlees J., 1971, "An Exploration in the Theory of Optimal Income Taxation", *Review of Economic Studies*, 38, 175-208.

North D., 1990, *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, New York.

Persson T. and L.E.O. Svensson, 1989, "Why a Stubborn Conservative Would Run a Deficit: Policy with Time-Inconsistent Preferences", *Quarterly Journal of Economics*, 104, 325-345.

Piketty T., 1997, *L'économie des inégalités*, La Découverte, Paris.

Rao J. M. and Khattry B. 2003 "Revenue Mobilisation: Loosening the Fiscal Constraint" in McKinley T. (ed.) *The Macroeconomic of Poverty Reduction in Indonesia,* UNDP.

Ramsey, R. 1927, "A Contribution to the Theory of Taxation", *Economic Journal*, 37, 47-61.

Rawls J., 1971, *A Theory of Justice*, Harvard University Press.

Roy R. and J. Weeks, 2004, "Making Fiscal Policy Work for the Poor", PNUD.

Saadi Sedik, T., 2004, *Déficits budgétaires, seigneuriage et croissance économique dans les pays en développement*. Doctoral thesis, Université d'Auvergne, CERDI.

Sachs J.D., J.W. McArthur, G. Schmidt-Traub, M. Kruk, C. Bahadur, M. Faye and G. McCord, 2004, "Ending Africa's Poverty Trap", *Brookings Papers on Economic Activity*, 1, 117-238.

Schneider F., 2003, "The Size and Development of the Shadow Economy Around the World and The relation to the Hard to Tax", Hard to Tax Conference, Atlanta.

Sen A., 1999, *Une nouveau modèle économique : Développement, justice, liberté*, Odile Jacob, Paris.

Shaw E.S., 1973, *Financial Deepening in Economic Development*, Oxford University Press, New-York.

Stiglitz J. E., 2003, "Development Oriented Tax Policy", *Paper for the International Ck Name*, Prague, August 24.

Stosky J.G. et A. WoldeMariam, 1997, "Tax Effort in Sub-Saharan Africa", *IMF Working Paper* 97/107.

Sutherland A., 1997, "Fiscal Crisis and Aggregate Demand: Can High Public Debt Reverse the Effects of Fiscal Policy?", *Journal of Public Economics*, 65(2), 147-162.

Tiebout C. M., 1956, "A Pure Theory of Local Public Economics", *Journal of Political Economy*, 64(5), 416-424.

Toye J., 2000, "Fiscal Crisis and Tax reform in Developing Countries", *Cambridge Journal of Economics*, 24(1), 21-44.

United Nations, 2002 "Report of the International Conference on Financing for Development Monterrey" Mexico, 18-22 March.

World Bank, 2003, *World Development Report. Making Services Work for Poor People*, World Bank, Oxford University Press.

List of Tables

Table of Contents