The Role of the State and Consequences of Alternative Forms of Public Expenditure Financing

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(*) This paper was prepared as a core reading for the WBI program on “Public Finance Policies and Poverty Reduction” which targets low-income countries that are preparing and implementing a poverty reduction strategy. B. Moreno-Dodson is Senior Economist at the World Bank Institute. J.M. González-Páramo is Professor and Head of the Public Finance Department at the University “Complutense” of Spain.

The views expressed in this paper are those of the authors and should not be interpreted as necessarily representing those of their institutions. The authors would like to thank Professors Mark Ride of Georgia State University, Jaime de Melo of Geneva University, and Gilles Nancy of Aix-Marseille II University for their thoughtful comments.

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Introduction

“Fiscal theory is not a matter of economics only, and that is its particular appeal”
R. Musgrave, 1998

This paper attempts to analyze the implications, for macroeconomic stability, growth and poverty reduction, of the choices made by governments to raise revenues in order to finance public spending. The analysis is preceded by a discussion of the role of the government and the rationale behind its attributed functions, since we believe that this configuration affects all public policy decisions made thereafter.

We notice that the most important instrument for providing opportunities, empowerment and protection to the poor is not public revenue policy, but rather the use of those resources channeled through public spending programs (subject not covered in this paper). Nevertheless, we consider that the revenue side of the government budget equation also has important efficiency and equity implications, and affects the dynamics of growth.

By reviewing most recent theoretical and empirical findings, the objective of the paper is to enlighten policy makers about the choices they confront and the consequences they should expect as a result of financing government actions, with a special emphasis on how these choices may affect those who live in poverty.

Considering how the main three justifications for state involvement in a market economy - establishing the pre-conditions for markets to operate efficiently, correcting market failures and promoting equity- have been implemented through the last decades, we indicate that the goals of the state should be established in such a way that they are consistent with its ability to operate efficiently, while promoting an improved role of markets. In developing countries, a greater need for state intervention in order to reduce market imperfections and inequalities, calls for essentially reducing government and institutional failures, so that the main functions of the state can be ensured.

We also recommend that the role of the state is assessed at both quantitative and qualitatively levels. Expanding public spending beyond certain levels, required to ensure the core functions of the state, may only lead to increasing fiscal deficits without necessarily reducing poverty levels.

Following the discussion on the role of the state, in an attempt to characterize pro-poor fiscal revenue policies, we then turn to analyze alternative policies by using two static criteria (efficiency and equity), and a dynamic dimension (growth function).

The efficiency analysis reveals the following results:

- Efficiency-oriented tax reforms should be featured by: a) reliance on a (dominantly consumption-oriented) set of broadly-based taxes; b) moderate tax rates on labor and capital incomes; and c) simple taxation of profits and returns to financial capital, with little incentive schemes, and as neutral as possible.
- The use of internal debt should be limited by the extent to which public borrowing requirements crowd out private investment.
- Reliance on non-concessional external debt should be determined by how much can be serviced and repaid, taking into account real growth and international interest rates.
• Monetary financing should not create efficiency costs associated with inflation and distortionary allocative effects going well beyond the classical excess burden.
• Foreign aid should soften the government budget constraint, decreasing external transfers and leading to improved policies, as opposed to delaying structural reforms in public revenue structures or resulting in unproductive spending. In heavily aid-dependent countries, instability associated with discretionary financing by donors should be avoided.
• User charges should have beneficial effects on quality and costs, and therefore constitute an efficient way to raise revenues.
• Quasi-fiscal activities, such as interest rate subsidies, credit ceilings, multiple exchange rates and others, should be avoided due to the large distortionary effects they create in financial markets.

The equity analysis leads to the following conclusions:

• Broad based tax systems, with fewer deductions and exemptions (apart from a personal income tax exemption not larger than per capita income and low or zero-tax rates on purchases of basic goods), relatively low tax rates (albeit moderately progressive in the case of the personal income tax) and compatible with administrative capabilities, are likely to provide a stable and pro-poor revenue policy alternative.
• The use of internal debt may negatively affect the poor through the interest rate and the credit rationing channels.
• The redistributive effect of external debt and foreign grants remains dependent on the use of funds by recipients, and the protection of the poor against fluctuations in international interest and foreign exchange rates.
• The inflation tax is the least equitable way of raising revenues since it lacks transparency and predictability, and it is highly regressive.
• Privatization can be pro-poor when: (a) cost reductions occur and well-designed regulations increase access to goods and services; (b) assigning ownership, tenure or customary use rights improves access to land and agricultural production; (c) the new private companies offer job opportunities to former or new employees; and (d) privatization proceeds temporarily help avoiding reliance on other regressive sources of finance and liberate revenues that are used for debt reduction.
• User charges are consistent with the so-called “benefit principle”. However, free (or lower cost) provision is the most appropriate pro-poor option when fees inhibit access of poor households to basic services.
• Quasi-fiscal liabilities hide medium/long term real requirements for public financing and may translate into future crisis affecting the poor unless they are properly protected.

The growth dynamics analysis has allowed us to conclude that: first, the causality between growth and inequality (associated with high poverty levels) is bi-directional. In other words, poverty and inequality undermine or impede growth, due to insufficient savings, powerful obstacles to asset accumulation by the poorest, waste in human potential, and social unrest and political instability. This means that without measures targeting the poor, efforts to boost private investment and hence growth will be jeopardized.

Secondly, there are deviations from an average one-for-one relationship between growth and incomes of the poor. These deviations reflect a complex set of interrelationships between growth patterns, institutions and public policies.
The revenue side of fiscal policy can positively affect growth in three main ways: a) providing a *financing* capability that can be used to finance public services, such as physical (basic infrastructure) and human (education and health care) capital, among others, in benefit of the poor; b) minimizing the negative effects of public intervention on *efficiency*; c) minimizing distortions to physical and human capital accumulation, and the labor market, determinant *equity* factors and key terms of the growth production function; and, more generally, d) promoting economic activity (risk-taking, technical advance, protection of property rights, etc).

This paper is divided in two parts. The first part (Section 1) analyses the need to define the role of the state and, accordingly, the goals of public policy, in response to the realities of developing countries.

The second part (Sections 2 and 3) focuses essentially on the economic and social impact of financing the different functions attributed to the state, and how the different revenue sources can be best used to meet public policy goals.

### 1. Role of the State in Developing Countries

Developed and developing countries interact in the fight against poverty in the context of increasing international mobility of goods, capital and labor. The negative consequences associated with high levels of poverty, such as suffering and unrest related to hunger, as well as diseases and ignorance, spread around the world, violating human rights, affecting the quality of life in both developing and developed countries, and contributing to creating an unfair world.

Regardless of international actions to reduce inequalities among countries and continents, each nation is in charge of defining its own development strategy and poverty reduction goals. This effort concerns all branches of the government (executive, legislative and judiciary) and its different levels (federal, state, local), as well as the different segments of the civil society (academics, NGOs, producer groups, unions etc.). Defining the role of the government, as a whole, vis-à-vis the private sector, and the types of economic relationships and alliances established between them, is essential to configure development patterns, unique to each country.

In this context, it is necessary to ask what should the state do and not do, and how best to do it, in order to set up realistic goals and configure expectations regarding the dynamics of development and the upcoming opportunities for citizens to get out of the poverty trap. In this section we will focus on the role of the state in a context where pro-poor growth becomes one of the goals of the state and a compromise vis-à-vis the country’s population and the entire world.

In “The Wealth of Nations”, 1776, A. Smith argued for a limited role of the government since competition and the profit motive would lead individuals, in pursuing their private initiatives, to serve the public interest. According to his theory, the role of the state should be limited to correcting obvious market failures¹, and to the provision of basic public goods², including law and

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¹ In an economy characterized by perfect competition, all goods and services have a single price. Neither firm nor consumer is large enough to be able to affect the market price and all agents have perfect and complete information. Under these circumstances, markets will produce an efficient allocation of resources. A “market failure” is a deviation from the conditions of this perfect competition scenario envisioned by Adam Smith’s invisible hand doctrine. In that case, a government intervention might be necessary to address the distortion.

² A “public good” is a commodity for which the cost of extending the service to an additional person is null (non-rival) and which it is impossible to exclude other individuals from enjoying it (non-excludable). Because private provision of public goods is generally insufficient, government must step in to encourage the
order, national defense and basic physical infrastructure. About one century later, Marx argued for the
greatest role of the state in controlling all means of production, considering private ownership
as the cause for evils in the society.

From Adam Smith to Marx, different intermediary models of the role of the state have been
suggested through the years. In fiscal theory, R. Musgrave distinguishes among four types of
states: the “service state” which performs a very limited role, the “welfare state” which admits
distributional concerns, the “communal state” according to which goals are set by the public (not
private) needs of its members, and the “flawed state’ which admits the failures of the state.

It’s now widely accepted that without well-designed state institutions, sustainable development,
both economic and social, is not possible. However, the task of defining what size and type of
government are most appropriate, and what is the right mix of markets and state activities, only
makes sense in reference to the realities of each country.

In most nations, we observe a system of mixed economy where public and private sectors assume
different functions. In principle, they can work together, strengthening each other. However,
whether those functions are complementary or substitutive depend on the established rules
governing their interaction.

In an increasingly interdependent world, changes in the external environment affect the way public
and private sectors relate to each other and what the government can and should do effectively.
For example, while it may be possible to hedge for exchange rate fluctuations, governments may
not be able to fully protect their economies from exogenous changes in international commodity
markets.

The long-run implications of increasing international mobility of goods and factors for the role of
governments are not yet clear. However, the way governments and companies interact in a
context in which entrepreneurship, capital and technology are mobile and respond to
internationally set incentives, is extremely different from the better known models of private-public
sector partnership observed during the 90s.

Inevitably, the economic openness of countries weakens the state’s ability of intervening
successfully, in favor of the markets. On the other hand, in an interdependent context, countries
may be penalized for inappropriate actions and failure to address systemic problems such as
corruption. Thus, interdependence may create incentives for governments to implement public
policies more efficiently. Under the current circumstances, the role of public policy remains
extremely important worldwide, although it has become more difficult to define its most appropriate
forms of intervention.

production of such goods. National defense provides a perfect example of a public good. When a nation
protects its freedom, it does so for any individual and cannot exclude anyone from enjoying it.

"An effective state is vital for the provision of the goods and services –and the rules and institutions- that
allow markets to flourish and people to lead healthier and happier lives", World Development Report, World
Bank, 1997.

"The experiences of government, and market imperfections and failures, are now combined and interpreted
in a more subtle way, and the issues are not presented as an artificial 'horse race' between the two", N.

Until now, we have been assuming that public goods are national. However, in the current world many public
goods are becoming global. International regimes for trade, transport, communications, taxation and
governance, are among the many examples of global public goods, which may have been in the past settled
domestically and are now subject to international coordination. Global public goods are defined as public

Regarding the specific functions of the state, we should differentiate between the state as a direct provider (goods, activities, services) and the state as a partner, catalyst and facilitator. It is important to make this distinction at an early stage since these two types of functions are associated with very different fiscal implications and will translate into different economic and social consequences, as we will see in the following sections.

1.1. Rationale for the Role of the State

Before discussing the main functions of the state in greater detail, it may be helpful to briefly describe the rationale for the role of the state. There are three main reasons for state involvement in a market economy: (1) establishing the pre-conditions for markets to operate efficiently; (2) correcting market failures, and (3) improving social welfare and promoting equity. We discuss each of these in detail below.

Establishing the pre-conditions for markets. The state needs to intervene to set up the preconditions for markets to operate efficiently, by creating the necessary institutions, laws and regulations that will facilitate their functioning. Lack of intervention of the state in areas, such as property rights and competition laws, may result in some market activities not being developed at all, or being developed in an inefficient manner due to the existence of, for example, too high entry costs or administrative and legal barriers. This function may be considered as a first and preliminary reason for the state to exist.

Correcting market failures. The second reason for governments to intervene is to correct the so-called market failures. In a general sense, they refer to a set of conditions under which a market economy fails to allocate resources efficiently. This requires that the state assists the “invisible hand” to approximate what the market would have done. There are different types of market failures, each requiring different forms of state intervention. In the case of public goods, while it may be possible to establish criteria defining the charge to individual consumers for their use, such criteria are usually very difficult to implement. This causes a market failure, which the state can attempt to overcome. Here the function of the state serves to reveal the citizens’ preferences for public goods, often expressed and channeled through the political process.

Closely related to public goods is the concept of externality, which is the recognition that the consumption or production of some goods may generate positive or negative external effects for the society, not reflected in their price. This argument has often been used to justify government intervention on the grounds that without government intervention, the market would overproduce or under-produce those goods, depending on whether the externalities were positive or negative.

In addition, market failures are often associated with incomplete markets, and imperfect or asymmetric information among consumers and suppliers. Markets may fail to provide goods or goods that benefit more than one group of countries and do not differentiate against any population group or generation. “Global Public Goods”, I. Kaul, I. Gruner, and M. Stern, 1999.


The theory of public goods (Knut Wicksell, Paul Samuelson) has been considered by Musgrave as a natural expansion of the thoughts of A. Smith.
services whose costs would be less than what the individuals are willing to pay\(^8\). Similarly, imperfect and asymmetric information may lead to erroneous valuation of goods and services, and therefore inadequate supply or demand.

Finally, market failures are also related to problems of adverse selection and moral hazard when buyers or sellers act exclusively on the basis of their own benefit and to the detriment of the general interest\(^9\).

*Improving social welfare and promoting equity*. The third, and equally important, rationale justifying the role of the state refers to the concern for distributive justice or equity. Even if markets could function efficiently, by their nature they would not ensure that growth and income are distributed in a fair or just manner. It was J. Stuart Mill who introduced in the literature an emerging idea that the state should play a role in respect to income redistribution, without compromising the efficiency of the markets to allocate resources. Welfare economics consider the function of the state going beyond the provision of public goods and focusing on the redistribution of income.

Three considerations are in order to indicate that there is a scope of action for the state, particularly in countries where poverty is widespread and only a small percentage of the population benefits from growth and development. First, in light of most recent theoretical analysis and evidence worldwide, there is general awareness about the need to increase efforts to combat inequality more vigorously, by providing opportunities and potential assets for the less well off. Second, empirical results around the world generally suggest that improvements in equity contribute to higher economic growth, faster development and less poverty\(^10\). Third, inequality often results in insecurity and crime, which are negative externalities with detrimental economic and social effects, nationally and globally.

It should be noted that, although the concern for equity is typically associated with the role of the state (given the nature of the private sector), this does not mean that only the state should/could contribute to reducing poverty. If one thinks of three main dimensions of poverty that contribute to reducing inequality -opportunities, empowerment and protection-the state is not solely responsible for providing them\(^11\). As a matter of fact, the private sector does play an active role creating

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\(^8\) In some cases, private markets may not function at all. For example in the case of private unemployment insurance, demand and potential supply exist, but the inability of private firms to monitor and verify private behavior prevent the creation of a well-functioning market for unemployment insurance.

\(^9\) Adverse selection exemplifies a situation in which differences in information (or information asymmetry) between the two parties lead to an unequal or inefficient exchange on the market. For example, a used-car salesman has better information, and therefore a better idea of its true market value, on the cars that he is selling than the customer. If the two begin negotiating over price, the salesman will accept offers that are too high, and reject offers that are too low. The result is that the only cars that get sold are the ones customers overpay for. Another common example of adverse selection is the health insurance industry. Adverse selection occurs when customers who are sick hide their risk while applying for health insurance. Adverse selection is also said to occur when insurers screen for low-risk applicants they will not have to pay out to. The effect is to undermine the entire premise of risk pooling by attempting to identify the risks for individuals. Moral hazard occurs in situations where agents maximize their own utility to the detriment of others because they do not bear the full consequences (or benefits) of their actions, because of uncertainty, incomplete information or the nature of the particular contract in force. The implications of moral hazard behavior is that economic agents take on more risk than they would normally in the expectation that some of their potential liabilities will be covered by others.


\(^11\) Opportunities essentially refer to jobs, regular income and assets. Empowerment is associated with inclusion and capabilities to influence the decision-making process. Protection is a need emerging from the
economic opportunities (employment, credit), promoting inclusion of all members of the civil society (associations of private sector producers, workers, parents of students, etc.) and protecting citizens (education, health and social protection public entities with private sector financing/delivery or/and vice versa), thus contributing to reducing poverty, through either its independent actions or by association with government activities.

1.2. Strengths and Weaknesses of the State

Several features distinguish the state from the private sector. It is essential to understand the strengths and weaknesses of the state in order to decide what functions it should perform. On the positive side, first, in democratic countries the individuals who are running public institutions are elected or appointed by an elected official. This makes them legitimate vis-à-vis the population. Second, the state is endowed with certain rights that private institutions do not have, such as imposing taxes on citizens, seizing private properties for public use, prohibiting, punishing and requiring participation. These capacities can be exercised because state institutions have two unique features: cohesion and universality. In some circumstances governments may be able to curb negative externalities when the private sector, acting alone, cannot.

On the negative side, the state also faces limitations, which are different from the private sector. First, the political process itself imposes restrictions, since the mandate of the state is often vague and subject to political pressure from interest groups. Even the existence of externalities would not justify public action if externalities were politicized to justify inappropriately large government interventions. Second, other restrictions are associated with the difficulty in predicting changes in the external environment and, more particularly, in the private sector reaction to a changing world, as well as gathering information reflecting the results of its actions. Third, the rules governing public institutions are often more rigid due to the fiduciary responsibilities of the state vis-à-vis the population, and the complexity and interaction of the many objectives being pursued in the name of public interest.

While there is agreement that markets are fully efficient only under fairly restrictive assumptions (many of them non-existing in developing countries), there is also recognition that "government failures" limit the effectiveness of the state in correcting market inefficiencies. For that reason, many argue that the state should focus on areas where market failures are most significant and under the conditions that ensure it can make a difference.

basic needs of the poor (education, health, basic infrastructure, etc.) and their vulnerability to external shocks. See World Development Report, World Bank, 2000.

12 The state’s essential properties of universal membership and the associated powers of compulsion and proscription, J. Stiglitz, 1995 “Role of Government in the Contemporary World”

13 Public choice theorists (such as J. Buchanan and Niskanen) study how to prevent the government from expanding as a result of rent-seeking interest groups.

14 The externalities argument came under attack by the Nobel prize R. Coase who affirms that in a market economy individuals internalize the effects of externalities leading to an optimum, without government intervening directly but rather providing property rights definition and protection.

15 Lucas, Barro and other economists associated with the rational expectations school also criticized the role of the public sector in stabilizing the economy in the 70s.

16 This perspective has been characterized by Musgrave as the model of the “flawed state”, to which the public choice school led by J. Buchanan is associated.


In addition to government failures, in the public choice sense, and difficulties to adjust to a changing environment, there are also “institutional failures” related to the gap between state goals and the availability of fiscal tools to pursue those goals, which lead policy makers to use less efficient public policy instruments. In order for the state to perform its essential tasks, public institutions must be guided by the appropriate incentives. In the case that public institutions are used by individuals for their own ends and to the detriment of the general interest, the state becomes an impediment to economic activity.

1.3. Two Main Functions of the State

As indicated earlier, for the purpose of our analysis we will divide the roles of the state into two broad categories: the state as a provider and the state as a promoter/facilitator/partner.

Regarding the functions of the state as a provider, there is now evidence and widespread acceptance that ownership of regular production processes are not sensible functions for the government. The private sector obtains better results even in areas that were previously considered as natural monopolies (energy, telecommunications), mainly as a result of technological changes.

Because of its nature, the state is better placed to provide public goods such as macro-economic stability, justice, and external defense clean environment and dispute resolution. Also, the state is better placed to provide protection from poverty or destitution, and defending individual rights and social stability. Effective alternative mechanisms may not be available through the market mechanism. The cost of providing basic services, plus the state contributions to satisfy social needs in the areas listed above represents as much as 40% of GDP in developed countries. As we will discuss later, the impact of these government interventions on economic and social outcomes depends not only on the composition of public expenditures to be financed and who finally benefits from them, but also on the fiscal tools that are chosen to be able to cover their cost.

Regarding the role of the state as a promoter/facilitator/partner, it is widely recognized that neither the state nor the private sector can function properly without both functioning well. Unlike the
private sector, the state has the means to define, supervise and enforce the rules of the game by regulating activities, promoting positive externalities and preventing negative ones.  

Today more than ever the state needs to be in the forefront as regulator of the markets, and the facilitator of an institutional and regulatory environment conducive to private sector activities. There is strong need to establish regulations that can facilitate the role of the private sector, while contributing to accomplishing the goals of public policy.

Regulations can become beneficial or harmful depending on how they are being used. Necessary regulations are those that allow activities to operate better and protect individuals from risk and losses, such as air and road traffic regulations, and drug and food safety norms. Regulations can also be used, *in lieu* of taxes, to mitigate negative externalities, like in the case of environmental regulations. However, regulations may constitute an inferior public policy instrument in the sense that, for example, regulation of harmful emissions may be inferior to using tradable pollution vouchers. By creating a private market for the right to pollute, the government may be able to channel the pursuit of self-interest to achieve a given reduction in pollution at minimum costs, which regulations may not be able to achieve.

Damaging regulations are those that allow individuals to enter an economic activity on favorable terms, by granting special concessions, or seek their own benefit to the detriment of the general interest, pursue questionable objectives from a social point of view, or are inefficient in the way they achieve well justified social objectives.

Regulations do not always represent an alternative to public spending. Pension reform is the clearest area in which government regulations, which encourage individuals to allocate part of their income to pensions, translate into lower government spending. However, in other areas such as unemployment, sickness or protection from other risks, regulations may have the opposite effect.

### 1.4. Role and Size of the State in Developing Countries

There are a number of significant difficulties that developing countries face as they strive to establish the preconditions for markets to operate efficiently, correct for market failures and improve social welfare. A list of these difficulties includes the following:

- Uneven income distribution and a high percentage of the population affected by severe poverty;
- Vulnerability to external shocks of all kinds (e.g., natural disasters, world prices, aid dependency, etc.)
- Numerous, pervasive and unpredictable market failures, due to imperfect information, prevalence of monopolistic practices and different kinds of negative externalities;
- Lack of appropriate incentives for the private sector to operate, in terms of competition policy, regulatory framework and judiciary system; and
- Government and institutional failures being far more common than in developed countries as a result of weak capacity and rigidities, as well as problems of credibility and governance.

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25 In democratic countries the Constitution, laws and regulations establish the rules that apply to private individuals and agents, as well as public institutions.
There seems to be a greater need in developing countries for state intervention for the reason stated above. However, a greater role of the state does not necessarily mean the need for higher expenditures and revenues to finance them. The following results illustrate the need to distinguish between size of the government measured quantitatively and role of the government measured qualitatively.

Although developed countries show relatively higher public revenue and expenditure to GDP ratios than developing countries, a priori this does not say much about either the size or the effectiveness of the government. There is evidence that the share of public expenditures in GDP in developed countries has been increasing. This indicator does not reflect the “economic” role of the state since most of its functions associated with legislation, judiciary system, macroeconomic and foreign trade policy have only represented about 2-3% of GDP. It is, however, significant from the “social” point of view since the composition of those expenditures reveals an increase in social security and social insurance. This result may be attributed to a number of reasons such as the importance of the labor factor in the industrialization process, changes in the number and age structure of the population, and an attempt to promote education and reduce income inequalities.

However, the results of those large expenditures in terms of improvements in the Gini coefficient and other social and economic indicators are not favorable. In other words, there is no evidence that larger governments, if measured by the percentage of public spending to GDP, have generated better social outcomes. In addition, an increase of expenditures combined with a general aversion to pay taxes have generated higher public deficits and larger debt-to-GDP ratios in the developed world, much to be avoided in developing countries.

There also seems to be enough evidence in both developed and developing countries about the fact that economies that have become more exposed to trade have also increased their levels of government expenditures relative to GDP. More open countries seem to have also increased the size of their tax to GDP ratios, as a result of higher trade tax revenue and larger tax bases, due to lower inflation resulting from openness. Although these results have not been necessarily associated with lower debt to GDP ratios, they can be considered as being favorable from the point of view of macroeconomic stability and pro-poor growth. However, one cannot conclude that it is the increased size of the government what is leading to faster growth and higher incomes of the poor.

In general, developing countries face greater difficulties in raising fiscal revenues, to finance increased public expenditures, than developed countries. This often translates into a large use of policy instruments, such as inflationary monetary financing, quasi-fiscal activities, high levels of

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26 OECD Economic Outlook, 1998.
28 The Gini index measures the extent to which the distribution of income among individuals within a certain economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentage of total income received against the cumulative number of recipients, starting with the poorest individual. The Gini index then measures the area between the Lorenz curve and the line of absolute equality. Therefore, a Gini index of zero represents perfect equality, and an index of 100 percent implies perfect inequality.
30 This argument has been used by V. Tanzi in favor of “small” governments where public spending as a share of GDP is not higher than 30%-40% of GDP.
31 IMF World Economic Outlook, 2000.
32 “Why do more open economies have bigger governments?”, D. Rodrik, 1996.
debt and external aid, deterioration of the government’s net worth and other public finance instruments not always reflected in conventional measures of fiscal deficits, as we will discuss in the second part of this paper.

In principle, the goals of the state should be established in such a way that they are consistent with its ability to operate efficiently, while promoting an improved role of markets. The great need for state intervention in developing countries in order to reduce market imperfections and inequalities, calls for essentially reducing government and institutional failures, and improving public sector performance, so that the main functions of the state can be ensured. Ultimately, it is essential that the choice of fiscal policy instruments used by the state contribute to eliminating, and not exacerbating market distortions, as well as improving, and not worsening, income distribution.

Section 2 of this paper begins by describing alternative forms of public expenditure financing that are available to the state, and then focuses on the basic economic and social implications (efficiency and equity) of using different budget financing instruments. In Section 3 we concentrate upon the dynamic effects of alternative public revenue policies.

### 2. Economic Effects of Alternative Forms of Public Expenditures Financing: A Static View

Most of the social and economic activities of governments have a non-market nature. Regulation, public order, redistributive policies and public spending programs intended to reduce poverty cannot be financed only on the basis of the willingness to pay revealed by citizens. This feature of public policy explains the prominent role of taxes to raise government funds in both developing countries and industrialized economies.

However, taxes are just one way to finance public sector interventions. When formulating a poverty reduction strategy for a given country, fiscal authorities need to assess the different alternatives for financing public expenditures. Section 2.1 provides an integrated description of the different sources of financing available to governments, with an emphasis on developing countries. In Section 2.2, we concentrate on the more static effects of raising government revenues (i.e. those related to the classical objectives of economic efficiency and income distribution). In section 3 we shift attention to the medium and long run effects of revenues on poverty, running mainly through the growth channel.

#### 2.1. Alternative Methods of Public Expenditure Financing

There are three main ways in which the public sector obtains resources from the economy domestically: levying taxes, issuing public debt and creating money. Taxes reduce private purchasing power to make a transfer of real resources possible. When tax revenues are insufficient to finance government spending, the transfer may occur through borrowing. It may also be financed by issuing high-powered money, i.e. currency held by private agents plus compulsory reserves of banks held by the monetary authority. Hence, the standard formulation of the government budget constraint in period $t$ can be written as:

$$\Delta E_t = T_t + \Delta B_t + \Delta M_t$$  \hspace{1cm} (1)
where:

\[ E_t: \] Total public spending in period \( t \)

\[ T_t: \] Tax revenues in period \( t \)

\[ \Delta B_t = B_t - B_{t-1}: \] Change in the nominal value of the end-of-period stock of public debt.

\[ \Delta M_t = M_t - M_{t-1}: \] Change in the stock of reserve –i.e. high-powered- money.

When focusing on revenue options for specific countries, equation (1) may not be very helpful, because it is stated in a highly aggregated level. Further, this formulation neglects some revenue sources, which are of crucial importance in most developing countries. In particular, access to external finance is vital when domestic saving is insufficient to meet investment needs\(^{33}\). This fact highlights the distinction between internal and external debt. Denoting the change in internal debt by \( \Delta B_t \), the total change in a country’s indebtedness is:

\[ \Delta B_t + e_t \Delta B_t^*: \] (2)

where

\[ e_t: \] Nominal exchange rate

\[ \Delta B_t^* = B_t^* - B_{t-1}^*: \] Change in the nominal value –expressed in foreign currency- of the end-of-period stock of foreign debt.

Most low-income countries are heavily indebted and devote a large proportion of the budget to debt service. This feature brings into the analysis an additional disaggregation. Total spending has two components: primary spending and interest payments:

\[ E_t = G_t + i_t B_{t-1} + i^*_t e_t B^*_{t-1}: \] (3)

where

\[ G_t: \] Primary public spending, i.e. public spending in goods, services and transfers (excluding interest expenses)

\[ i_t: \] Interest rate on internal public debt

\[ i^*_t: \] Interest rate on external public debt.

Among the omitted elements in the simplified version of the government budget constraint (see equation 1), the most important are as follows. First, current government revenues comprise

\(^{33}\) The resource balance of low-income countries (i.e., difference between gross domestic savings and gross domestic investment) was -1 percent of GDP in 1999. For some of these countries the need of external financing was considerably more acute. Thus, in the Sub-Saharan Africa we find cases such as those of Ethiopia, with a resource balance of -15 percent of GDP, Ghana, -18 percent, Kenya, -8 percent, and Zambia, -11 percent. Outstanding cases in Latin America are those of Bolivia, -9 percent of GDP, Guatemala, -10 percent, Honduras, -17 percent, and Nicaragua, -36 percent (World Bank data, 2001).
nontax proceeds. This revenue source includes fees, public prices, public entrepreneurial income, voluntary unrequited income and fines\(^{34}\).

Second, low-income countries finance a non-negligible proportion of their public spending through the receipt of Official Development Aid (ODA) which is composed (Box 1) of not only grants \((\Delta F^*_t)\), but also loans made on concessional terms by official agencies and by multilateral institutions, as well as foreign debt write-downs.

### Box 1: Official Development Assistance

Official Development Assistance (ODA) consists of disbursements of loans (net of repayments of principal) made on concessional terms, and grants given by official agencies of the members of the Development Assistance Committee (DAC), multilateral institutions and certain countries, to promote economic development and welfare in the recipient economies. Loans with a grant element of more than 25 percent are included in ODA, as are technical cooperation and assistance.

Data shown in the table below do not distinguish among different types of aid (program, project, or food aid; emergency assistance; peacekeeping assistance; or technical cooperation), each of which may have a different effect on the economy.

Aid flows have declined over the 1990s for a number of reasons (see World Bank, 2000), but principally because governments in donor countries are increasingly preoccupied with domestic issues and striving to tighten their budgets, and because public opinion in those countries has become more skeptical about the effectiveness of aid. But even as the volume of aid has declined, the relevance of ODA as a revenue source in low-income countries remains relatively quite important.

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>11.8</td>
<td>7.5</td>
<td>140.5</td>
<td>49.7</td>
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<td>Ethiopia</td>
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<td>28.1</td>
<td>115.0</td>
<td>109.8</td>
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<td>Zambia</td>
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<td>11.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Low-Income</td>
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<td>1.3</td>
<td>14.4</td>
<td>12.9</td>
</tr>
<tr>
<td>Latin America</td>
<td>0.4</td>
<td>0.2</td>
<td>2.0</td>
<td>-</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>9.9</td>
<td>4.1</td>
<td>47.4</td>
<td>-</td>
</tr>
</tbody>
</table>


Thirdly, there exist other forms of implicit finance, or quasi-fiscal activities, which are often reflected quite imperfectly in the government budget constraint. Outstanding among these

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\(^{34}\) This revenue category does not include borrowing, repayment of previous lending, sales of fixed capital assets or stocks, land or intangible assets, nor gifts from non-government sources, all of which are listed under different revenue headings.
are subsidized loans and guarantees extended by the central banks and other public financial institutions, which engage in financial transactions. These have important fiscal implications, as they intend to replicate the same function as taxes and subsidies (Box 2).

**Box 2: Quasi-fiscal activities in low-income countries**

Besides printing money, central banks undertake quasi-fiscal activities through many channels, of which the following five are the most important: 1) Interest rates on loans to the government may be set at below-market rates, as a result of which public spending is not evaluated at its true opportunity cost; 2) Central banks may compel commercial banks to hold government securities at below-market rates through statutory requirements; 3) Central banks may also pay below-market rates on reserve assets; 4) Central banks may impose interest rate subsidies and credit ceilings to particular groups of creditors; and, 5) Central banks may regulate the exchange rate via multiple exchange rate agreements (an implicit tax/subsidy to exporters/importers) and exchange rate guarantees to borrowers of foreign exchange.

Other public financial institutions—frequently development banks—undertake quasi-fiscal activities, like subsidized lending to specific groups without adequate collateral, specific treatment to some kinds of lenders, and other restrictions on financial markets.

Quasi-fiscal activities are typically undertaken to circumvent legislative and parliamentary scrutiny, as well as for administrative convenience in some cases. In general, they have important fiscal effects, reduce efficiency, and difficult long-term fiscal adjustment, often resulting in unexpected consequences for the poor thus impeding development. Difficult as it is to adequately measure their cost and effects (see Mackenzie and Stella, 1996), quasi-fiscal activities should be considered in any evaluation of a fiscal program, in order to decide over their phasing-out, or alternatively the conversion of some of these activities into normal budgetary operations.\(^{35}\)

Finally, the public sector can increase revenues by resorting to changes in net worth, i.e. reducing financial public assets by means like privatization of productive property (see Box 3), not shown in equation 1 which presents the government budget constraint in terms of flows.

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\(^{35}\) “Governments as Risk” Polackova-Brixi and Shick, 2002.
Box 3: Revenues from privatization

Privatization leads to a transfer of productive assets from the state to the private sector through methods such as auctions, stock offers, stock distributions, negotiated sales, management-employee buyouts and coupon exchanges. Other methods include joint ventures, leasing, management contracts and concessions.

Privatization transactions in the developing world surged strongly in 1997 and 1998, reaping revenues of more than $US 110 billion, over 40 percent of total privatization revenues in the 1990s. Infrastructure has accounted for the largest share: 52 percent of total revenues, half of which was raised through the sale of telecommunications companies.

Several low-income countries have obtained substantial amounts of revenues from privatization over the last decade. Thus, Zambia raised 3.2 percent of GDP per year on average, some 20 percent of government spending in 1995. The sale of copper mines in 1998 provided a large part of these revenues. Ghana raised 1.5 percent of GDP on average over the 1990s, around 8 percent of total spending. In recent years Ghana has privatized a bank and an oil palm plantation. In Latin America, Bolivia has been the most active country, raising an average of 1.4 percent of GDP per year on average, some 6 percent of public spending.

Decreasing public investments has the same net worth-reducing effect as selling public assets. While increasing public revenues through these reforms may temporarily help to lower the “flow” of public deficit, reducing the “stock” of Government net worth can negatively affect the quality of the fiscal adjustment and affect the poor negatively in the long run36.

Thus, using (2)-(3) and taking into account this extra source of funds, the main public revenue sources of low-income countries show up in a consistent fashion when re-writing then government budget constraint (1) as:

\[
G_t = T_t + (\Delta B_t - i B_{t-1}) + (\Delta B_t - i' B_{t-1}) + \Delta M_t + N_t + e F_t^* - \Delta A_t
\]

where

- \(N_t\): Non-tax revenues
- \(\Delta A_t = A_t - A_{t-1}\): Change in government financial assets
- \(F_t^*\): Foreign grants, expressed in foreign currency.

From expression (4) it is readily apparent that public debt (internal or foreign) provides additional funds available for primary spending only to the extent that the increase in public debt net of interest payments is positive.

Needless to say that the government budget constraint in expression (4) is just an accounting identity. It says nothing about the economic effects of different financing structures of a given level of total spending, nor provides any description of the rich and complex relationships that exist among the different sources of revenue. Uncovering these effects and relationships, taking into special consideration poverty effects, is the main purpose of the remaining part of the paper.

2.2. Economic and Social Effects of Public Revenue Policies: Efficiency and Income Distribution

The goals of public finance in low-income countries are those in line with economic policy as a whole. Following the framework advocated by Musgrave (1959) more than four decades ago, these objectives are: macroeconomic stability, efficiency in resource allocation and an appropriate distribution of income.

All three objectives contribute to the ultimate goal of reducing poverty, by increasing the disposable income of the poor, promoting job opportunities and sustained growth, and by ensuring certainty and a stable economic policy environment, among others.

It’s important to notice that public revenue policies are by no means the only or the most important instruments for achieving poverty reduction objectives. In fact, it is the use of those resources channeled through public spending programs (education, health, social insurance, and so on) that reveals itself more effective ultimately in providing opportunities, empowerment and protection to the poorest. Nevertheless, the revenue side of the equation also has important consequences from the economic and social points of view. Ultimately, the budget considered as a whole, remains then one of the most pervasive instruments of public policy. In this context, the effects of alternative means of financing public spending must be taken into account in formulating poverty reduction strategies.

For expository purposes, Section 2.2 will concentrate on the more static effects of public revenues, i.e. those related to the classical objectives of economic efficiency and income distribution. In Section 3 we will focus our attention on the more dynamic effects of fiscal revenues that influence growth and poverty

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37 The WDR 2000 proposes a strategy for attacking poverty in three ways: promoting opportunity, facilitating empowerment, and enhancing security. For definitions and policy implications of this strategy, see World Bank (2001).
38 For an analysis of the joint impact of taxes and government spending, see “How do Fiscal Systems Impact the Poor” by Jorge Martinez-Vazquez, 2002.
39 The order of presentation of the different sources of public funds does not imply any priority, in a normative or positive sense. If anything, the first three sources of finance pertain to what may be called “ordinary public finance”, in terms of stability and revenue-generating capacity, while the remaining sources tend to be either more extraordinary in nature, or more limited in their revenue potential.
Efficiency in resource allocation

(1) Tax revenues

The primary objective of taxes is to collect revenues. As a matter of fact, the reliance of the state on tax revenues tends to increase with the level of development (see Box 4). This association may be explained in part by the advantages of capturing broad tax bases, taxing income or consumption, which provide revenue-generating capacity and revenue stability, together with the increased sophistication of the tax administration that economic development facilitates. Despite their welfare costs—which we shall describe below—in general it can be said that taxes—supplemented by some amount of public debt, and particularly so in periods of significant public investment effort—provide the best means of financing the bulk of public expenditures, in terms of most widely accepted normative criteria in public finance: efficiency, equity, stability, revenue-generating capacity and transparency.

If we disregard the specific use of public funds and concentrate on revenues only, taxes impose on society four types of cost: a) A direct cost or revenue foregone, which is the inescapable burden of taxes as taxpayers reduce their disposable income by the act of paying the amount due; b) An indirect allocative effect, or excess burden, which is the welfare cost associated with the economic distortions induced by taxes as they alter relative prices of goods, services and assets; c) An administrative cost, since managing tax forms, tax control, payment procedures and tax inspection is costly; and, d) A compliance cost, which is the burden imposed on taxpayers when they try to comply with tax rules (i.e. legal advice, time spent filling out forms or reading tax codes, record-keeping, and the like).

To a certain extent, there exist trade-offs among some of these costs. Thus, for example, in order to reduce the inefficiency or excess burden of the tax system, and also to economize on compliance costs, money and resources can be spent in improving tax administration.

The first direct cost of taxes is not distortionary of economic decisions. It is a pure income effect: if taxpayers were given the money back, their behavior would remain unchanged. However, income effects also have allocative effects that may influence savings, employment and growth. For instance, a reduction in disposable income tends to increase labor supply but reduces private savings. The net effect on economic activity may be positive or negative, depending on the relevant elasticities.

40 The size of this welfare cost associated with the excess burden, depends upon the extent to which a tax distorts choice, i.e. on the importance of the substitution effect created by the change in relative prices. The excess burden of an ad valorem tax on a commodity can be estimated as $\frac{1}{2}epqt^2$, where $e$ is the (compensated) elasticity of demand, $p$ is the price of the good before the tax, $q$ is the quantity consumed, and $t$ is the rate of tax. See Stiglitz (1986) for a detailed explanation.

41 The income effect of taxes is independent of the effects related to the specific use of revenues generated by the taxes, which we will not analyze in this paper.

42 If we assume that leisure is a “normal good”, workers will demand less leisure –i.e. they will work more— in response to a reduction in disposable income. On the other hand, if the marginal propensity to consume out of disposable income is less than one, a reduction in disposable income will lower private savings (see Boadway, 1979).

43 According to Loayza, Schmidt-Hebbel and L. Servén (2000), in LDCs an increase of taxes by 1 percent of GDP reduces private savings in 0.2 percent in the short run and 0.5 percent in the long run.
Regarding the excess burden of taxation, for a given amount of tax revenue, the effect depends on a number of features of the tax system\textsuperscript{44}, namely: a) Composition of tax revenues; b) Size and erosion of the tax bases; c) Tax rates; and d) Other factors.

a) As to the composition of taxes, taxing income is generally thought to entail a higher excess burden than taxing consumption, since the latter is equivalent to a tax on labor income, while the former gives rise to an additional distortion, which comes from the taxation of savings income. Income taxes on individuals are usually considered more efficient than those falling on entrepreneurial income, since profit taxes directly influence the incentives to invest, while labor supply is relatively inelastic with respect to changes in the wage rate. These presumptions are based more on intuitive albeit plausible reasoning and empirical results (for example, see Easterly and Rebelo, 1998) than on completely general theoretical arguments\textsuperscript{45}.

As to the composition of consumption taxes, the economic rationale for excise taxes lies mainly in their usefulness in discouraging selected consumption items or activities (for example, consumption of alcohol, fuel or tobacco). Apart from this corrective function, it can be said that the distortionary effects of consumption taxation are minimized when most revenues come from a general consumption tax borne by the final consumer, such as for instance, the value added tax.

Finally, although taxes on external trade might be justified on a limited basis, for revenue reasons if other taxes prove difficult to administer or when a moderate protection is thought necessary to encourage local industries (customs duties), an excessive reliance on this revenue source should be avoided since trade taxes may distort the pattern of development by promoting non-competitive national industries, at the same time that they tend to discourage, both directly and indirectly (through duties on imported inputs), the export-oriented activity.

b) For any given choice of tax structure (i.e., consumption taxes versus income taxes), the distortionary effects of taxation are reduced as the size of the tax base increases close to each country potential, with minor exceptions (tax incentives). When loopholes proliferate, incentives exist to substitute non-taxed for taxed activities, away from any justified criteria for substitution in supply and demand (i.e. changes in cost, in quality, or in preferences, among others). Erosion of the tax base in low-income countries is due more to the prevalence of informal sector activities and occupations than to any other single cause. Notwithstanding, improvements in tax administration, a phasing-out of tax privileges would always improve the efficiency of the tax system in a non-negligible fashion.

c) When taxing goods, services and assets, the level and the number of tax rates are also important determinants of the tax-induced inefficiencies in the allocation of resources. As it is well known, the size of a tax distortion (approximately) increases with the square of the tax rate falling on a single tax base, i.e. doubling the tax rate multiplies the excess burden.

\textsuperscript{44} For a complete description of the tax system trade-offs with respect to poverty, see ‘Tax Revenue Design’ by Eric Zolt, 2002.

\textsuperscript{45} The superiority of consumption taxes holds to the extent that taxing income produces only income effects. This would be the case where the compensated elasticity of labor supply is very small and income from other sources is lump sum (for example, inheritances, or some kinds of property income). If labor supply were more elastic than generally assumed, optimal tax theory concludes that a tax on income could be more efficient than a tax on consumption (see Sandmo, 1985).
by a factor of four\textsuperscript{46}. This implies that tax rates should be as low as possible. If we take revenue needs as given, lowering tax rates requires broadening the tax base. On the other hand, while the literature on optimal taxation favors a diversified structure of tax rates, there exist many reasons to favor a small number of tax rates in practice\textsuperscript{47}. Leaving aside the information requirements needed to implement an optimal tax system (for instance, compensated price elasticities of demand for all goods and services), administration costs increase with diversity, and the political acceptability of such a system becomes at risk. Levying taxes on a broad tax base at fairly low uniform rates probably is the least inefficient form of doing it.

d) There are many other features of tax policy that may positively influence resource allocation. Prominent among these is the tax administration. In fact, the merits and drawbacks of a given tax system hinge upon the characteristics of the tax administration, i.e., those that determine its cost-effectiveness in collecting, auditing, providing information and advice to taxpayers, and enforcing penalties. For instance, the availability of withholding taxes for income diminishes compliance costs and proves successful to curtail revenue losses due to tax evasion. Similar effects can be expected from improvements in data gathering, as well as from the introduction of simplified tax regimes for small taxpayers, timely compliance controls (frequently based upon presumptive methods) and dissuasive penalties. In general terms, it can be said that reforms oriented to facilitate tax administration and compliance go hand in hand with improvements in the allocative properties of the tax system.

By definition, taxes distort market allocation insofar tax provisions alter relative prices. But not all tax systems have the same distortionary effect. Available evidence (see Box 4) for developing countries indicates that corporate and personal income taxes have a negative impact on economic activity, whereas taxes on imports and exports do have a significant, negative effect on investment\textsuperscript{48}.

\textsuperscript{46} For instance, see Rosen (2002).
\textsuperscript{47} Heady (1993) provides a survey on how the optimal tax literature can be used as a guide for policy formulation.
As shown in the table below, a few patterns emerge, with some exceptions (see also Tanzi, 1991): 1) Low-income countries rely more than other nations on nontax revenues; 2) Income taxes and social security taxes are substantially less important in low-income countries than taxes on goods and services; 3) Concerning the former, low-income countries usually raise more revenues from the corporate income tax than from the personal income tax (Tanzi and Zee, 2000); and 4) Revenue from trade taxes is significantly lower in high-income countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax structure (share in total taxes in 1997)</th>
<th>Country Tax/Govt Spending (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income &amp; Profits</td>
<td>Social Security</td>
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<td>Bolivia</td>
<td>68.9</td>
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<td>Low-Income</td>
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<td>High-Income</td>
<td>29.3</td>
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</table>

Source: World Bank (2001) and 2000 World Development Indicators; Shome (1999); Zambia: National sources.

On the other hand, non-neutralities in the taxation of savings and investment severely distort capital markets. These distortions become even worse when tax evasion is widespread and the informal sector is large.

Given these disincentive effects of taxes, efficiency-oriented tax reforms should be featured by: a) Reliance on a (dominantly consumption-oriented) set of broadly-based taxes; b) Moderate tax rates on labor and capital incomes; and c) Simple taxation of profits and returns to financial capital, with little incentive schemes, and as neutral as possible.

(2) Internal debt

The government may finance part of its spending programs by means of borrowing in the internal market. This can be done in two different ways. On the one hand, when there exists public demand for government bonds and capital markets have reached a sufficient capacity of absorption, the government can issue market debt.

The precise nature of the effects of internal debt on efficiency, vis-à-vis taxes, depend, among other things, on the extent to which government borrowing requirements crowd out private investment. If the government exerts control over interest rates, the issuing of public bonds will displace some part of the given pool of available funds, thus reducing investment through
rationing. Alternatively, with interest rates determined in the market, public debt will reduce the supply of funds for private borrowing, thus placing an upward pressure on interest rates.

Crowding out via interest rate increases will occur unless private savings rise by the same amount of the debt issued, in anticipation of the future taxes that the government will have to introduce in order to finance interest and repay the principal.

If this were the case, internal debt and taxes would be equivalent and debt finance would be neutral, i.e. the so-called Ricardian equivalence result would hold. In a simplified way, the main idea behind the debt neutrality proposition is that debt finance merely postpones future imposition of taxes. In a Ricardian economy, debt finance does not affect national savings nor the external equilibrium or long-run growth. Stringent assumptions are required for Ricardian equivalence to hold: infinite horizons (or equivalently, full intergenerational caring); perfect capital markets (no borrowing constraints), far-sighted rational consumers, absence of uncertainty and nondistortionary taxes.

In this respect, however, a majority of studies reject strict Ricardian equivalence in LDCs, mostly as a result of binding borrowing constraints affecting a large share of consumers. This is due to the fact that in these countries capital markets are subject to large restrictions and distortions, financial systems are underdeveloped, consumers are subject to liquidity and borrowing constraints and private agents are subject to high uncertainty regarding the incidence of taxes. Under these circumstances, the Ricardian equivalence cannot hold. A reduction in taxes of 1 per cent of GDP financed through an issue of internal debt increases private savings by 0.4-0.6 GDP points. This rejection of Ricardian equivalence supports the argument that crowding out of private activity will occur when government spending is financed through internal borrowing.

The authorities can also intervene directly in the capital market, requiring public sector banks, and private financial and non-financial institutions to hold government bonds. Interventions of this type are quasi-fiscal sources of revenue (see Box 3) which have only negative implications on efficiency: restriction of the development of financial intermediation, increase in the spread between borrowing and lending rates, reduction of savings and investment in the economy and inefficient use of financial savings. In sum, compelling banks to hold public debt at below-market

49 The Ricardian equivalence states that deficits and taxes are equivalent in their effect on consumption. The reason lies in the fact that a consumer with perfect foresight recognizes that any increase today in Government debt resulting from expansionary policies will have to be ultimately paid off by an equivalent increase in tax burden, by an amount equal to the present value of the initial tax relief. As a result, the Ricardian equivalence implies that fiscal deficits have no real effect on the economy.


52 In “Public Sector Deficits and Macroeconomic Stability in Developing Economies”, Edwards (1996) estimates the offset coefficient for LDCs in the range of 0.36-0.65. In “What Drives Private Savings Across the World?”, Loayza, Schmidt-Hebbel and Servén (2000) provide a long-run estimate of 0.45. This evidence points against full Ricardian equivalence, a rejection that can be attributed to the large share of credit-constrained individuals (see López, Schmidt-Hebbel and Servén, 2000).

53 When the offset coefficient is less than 1, an increase in government borrowing reduces national savings, thereby raising interest rates.
rates is equivalent to a tax on the banking system\textsuperscript{54}, an inefficient tax that will be shifted to savings, investment and financing decisions.

(3) External debt

When taxes and internal borrowing are insufficient to finance government’s revenue needs, access to external finance becomes vital. Borrowing from abroad facilitates access to resources from the rest of the world, thus permitting the finance of imports and government programs without a financial crowding out effect. When external borrowing has elements of concessionality, which are similar to grants, the margins for additional borrowing increase, as debt service obligations – the term $e_i^*B^{*,-1}$ in equation 4- are reduced.

Reliance on nonconcessional external financing leads to accumulation of debt, which has to be serviced and repaid. This makes the recipient economy vulnerable to exogenous shocks in world interest rates and in exchange rates, whose impact is accentuated the larger is the share of short-term debt\textsuperscript{55}. External debt increases the availability of foreign reserves, which could induce an appreciation of the domestic exchange rate that may damage exports and encourage imports (unless foreign exchange comes in substitution of domestic money). A final drawback of foreign debt is the procyclical nature of some of its components, in particular short-term bank lending, to domestic growth shocks and to external terms of trade shocks\textsuperscript{56}.

When recipient countries undergo difficulties with debt servicing, they can enjoy the benefits of debt relief packages, like those included in the Heavily Indebted Poor Countries (HIPC) Debt Initiative, which provides support in exchange for better policies (see section 3).

A way of postponing external debt servicing problems is the accumulation of arrears. Delays in payments provide only short-term alleviation of financial compromises, but at the same time this practice jeopardizes government credibility and the availability of future financing.

(4) Monetary financing

Through their central banks, government obtains resources from their exclusive privilege of printing money, i.e. the term $\Delta M$ in expression 4. If we express money growth in real terms, we may write $\Delta M/P = \mu M/P$, where $\mu$ is the rate of money growth. With a constant velocity of circulation, $\mu = g + \pi$, where $g$ is the growth rate of GDP and $\pi$ the rate of inflation. Thus, seignorage –the real revenue from money creation- can be expressed as\textsuperscript{57}:

$$\frac{\Delta M}{P} = g \frac{M}{P} + \pi \frac{M}{P}$$

As long as money creation responds to an increase in real transactions, seignorage will remain noninflationary. But when money growth is higher, printing money gives rise to the so-called

\textsuperscript{54} This tax-like nature is reflected in the government budget constraint (equation 4) in a reduction of the interest paid on public debt. The costs to society of this form of financing the budget could largely exceed the revenue thus obtained.

\textsuperscript{55} Short-term debt also increases the vulnerability to liquidity crises.

\textsuperscript{56} In “Global Development Finance”, the World Bank (2000) estimates quite sizable elasticities of short-term debt and risk ratings with respect to GDP growth in periods of slow GDP growth and/or terms of trade deterioration.

\textsuperscript{57} See “Seignorage in Highly Indebted Developing Countries” McPherson (2000) for alternative, more analytical definitions of seignorage.
"inflation tax": \( \pi M/P \). The inflation tax is an implicit form of taxation, like most quasi-fiscal activities, which lacks transparency and has little benefits and many drawbacks as far as resource allocation is concerned.

During the 80s and early 90s, Bolivia, Ghana, Kenya and Zambia relied on the inflation tax as a significant source of revenue. But over the longer term, the experience has shown that high inflation reduces the attractiveness of domestic monetary assets, thereby limiting the size of the potential revenue from printing money. This is particularly true once we recognize that fiscally induced inflations usually reflect economic difficulties, where governments are seeking resources everywhere. This in turn stimulates currency substitution and capital flight, thus limiting the inflation tax yield.

Empirical evidence suggests that the efficiency costs of inflation are extremely high\(^{58}\). This is so because inflationary finance has distortionary allocative effects that go well beyond the classical excess burden measure. As higher inflation decreases money holdings, it distorts resource allocation in favor of financial intermediation (i.e. credit cards, checking accounts, and other short-term interest bearing assets), thereby exacerbating problems of financial repression\(^{59}\). High and variable inflation blurs price signals, reduces the return to savings, compounds the distortions created by the tax system, and diminishes the reputation of economic authorities, a phenomenon that is manifested in the general public’s loss of confidence in the effectiveness of government policy.

Inflation negatively affects the efficient functioning of markets in many ways\(^{60}\). Thus, inflation generates losses of efficiency associated both with price changes made by sellers and with the increase in the number of transactions needed to adjust holdings of liquid balances. Further, inflation distorts price signals, inducing prediction errors and thus resource waste. Rapid inflation induces buyers to speed up purchases to avoid the inflation tax, which thus inhibits the adequate selection of products\(^{61}\). High and variable inflation rates induce economic agents to assign resources to protect themselves and fewer resources to productive activities\(^{62}\). Inflation also impedes an efficient functioning of the financial system.

In effect, inflation decreases the efficiency in the allocation of savings, increases the costs of converting illiquid into liquid assets, and exacerbates credit rationing. Further, even if perfectly anticipated, inflation exacerbates tax-induced distortions because of the nominal rigidities present in the tax system. This perverse interaction particularly affects savings and investment decisions,

\(^{58}\) See “Overview: The Substance and Process of Tax Reform in Eight Developing Countries”, Thirsk (1997a), and “Fiscal Deficits and Macroeconomic Performance in Developing Countries”, Easterly and Schmidt-Hebbel (1993).

\(^{59}\) In “Inflation and the Misallocation of Resources”, Frenkel and Mehrez (2000) find significantly positive sizable effect of inflation on the relative size of the financial sector, an effect that is smaller in low-income countries owing presumably to financial repression but higher in those countries having experienced high inflation. Much in the same vein, in “Output Gains from Economic Stabilization”, Gylfason (1998) shows that inflation depreciates cash capital needed by firms (to economize on the use of other inputs) relative to real assets, hence distorting the utilization of capital.

\(^{60}\) For a detailed overview, see “Advanced Macroeconomics” Romer (1996).

\(^{61}\) As inflation causes efficient and inefficient firms to be less distinguishable, the incentives to engage in cost reduction are dampened and lower growth results “On High Inflation and the Allocation of Resources” Tommasi, 1999.

giving rise to welfare losses\(^6^3\). All in all, we may conclude that insofar as it negatively affects the functioning of the markets, high and variable inflation “adds sand to the wheels of the markets”.

(5) Foreign grants

Grants, concessional finance and debt relief (see above) may have positive effects on resource allocation when they lead to better economic policies, and when aid constitutes a form of insurance against large negative shocks (i.e. terms-of-trade shocks or climatic shocks)\(^6^4\). However, aid may also reflect discretionary financing by donors that can change significantly from year to year, introducing instability in heavily aid-dependent countries. Foreign aid may also be fungible\(^6^5\), thus allowing for tax relief or unproductive spending, thereby delaying structural reforms in public revenue structures\(^6^6\). When aid helps soften the government budget constraint, decreases in external transfers may lead some countries to improve policies\(^6^7\).

(6) Privatization

Public assets should not be a drain on the public budget. When the economic rationale for public ownership is absent, restructuring should not be but the first step towards privatization. Sales of public enterprises eliminate a drag on the fiscal budget, and may increase future tax revenues, if the performance of the privatized activities increases. At the same time, privatization is a contributing factor to economic transformation towards market orientation, and stimulated private domestic investment, economic activity and employment. In addition, privatizing public firms is a source of foreign exchange when foreign investors contribute to privatization proceeds\(^6^8\). A large part of these revenues respond to foreign direct investment, which is more stable and has more indirect beneficial effects than portfolio investment.

\(^6^3\) The negative interaction between inflation and the tax system generates quite sizable inefficiency and growth costs even in low-inflation industrialized economies. For some empirical estimates, see “Does Inflation Harm Economic Growth?” Andrés and Hernando (1999) and “A Cost-Benefit Analysis of Going from Low Inflation to Price Stability in Spain” Dolado, González-Páramo and Viñals (1999).

\(^6^4\) In “Has Aid Efficiency Improved in the 1990s?”, Dollar (2000) shows that the impact of total ODA and International Development Association (IDA) flows over the 90s has favored good policies, even as aid flows have been falling. This result has been challenged in a number of papers. Thus, on “On Aid, Growth and Good Policies”, Dagaard and Hansen (2001) show that the interplay between good policy and aid is theoretically ambiguous. Empirically, they obtain a positive effect of aid on growth in any policy environment. But since good policies have positive growth effects of their own, aid should be used to provide recipient countries with the incentives to promote better policies (“Aid and Performance: A Reassessment”, Guillaumont and Chauvet, 2001). On the other hand, in “Global Development Finance” World Bank (2000) suggests that external vulnerability (changes in primary commodity prices) and stabilization goals (unexpected growth collapses) have been, in practice, important determinants of IDA aid-flow decisions. In fact, aid seems to have accelerated growth in the more vulnerable countries (Guillaumont, 2001).


\(^6^6\) There is some evidence of negative returns at high level of aid inflows (“Aid Allocation and Poverty Reduction” Collier and Dollar, 1999; and “Are There Negative Returns to Aid?” ; Lensink and White, 2001).

\(^6^7\) As in “Bargaining over Reform” Hsieh (2000) shows in a game-theoretic bargaining framework, the availability of foreign aid increases the delay in macroeconomic stabilization efforts when external transfers are used in part to finance tax cuts. See also “Adjustment in Africa: Reform, Results, and the Road Ahead” World Bank (1993).

\(^6^8\) Privatization deals in less developed countries are more likely to be cross-border acquisitions than privatization deals in developed countries (“Characteristics of Privatization: Evidence from Developed, Less-Developed, and Former Communist Countries”, De Castro and Uhlenbruck, 1997). In fact, foreign investors contributed 60 per cent of privatization in Sub Saharan Africa over the 1990-1998 period (“Global Development Finance”, World Bank, 2000).
Insofar the value of the proceeds from privatization (plus the net present value of taxes that will be paid by private owners) exceeds the net present value of revenues under public ownership, privatization is a means of improving the fiscal balance\(^6^9\).

Notwithstanding, privatization is just a non-permanent way of obtaining liquid assets in the short-run. Thus, access to potential privatization proceeds should not delay the introduction of other more stable revenue-generating sources of revenues. Nor should privatization proceeds be used to finance current spending\(^7^0\).

All in all, it should not be overlooked the fact that the overall success of privatization must be measured in terms of efficiency gains, not short-run public revenue gains. And potential gains in productivity and in profitability will be reaped only if privatization is accompanied by the appropriate regulatory framework needed to deal with, for example, natural monopolies (telecommunications, railroads, water, electricity, and the like).

Privatizing state enterprises tends to improve technical and allocative efficiency of the markets when the privatized activities are not affected by market failure. This will also be the case of natural monopolies and other imperfectly competitive activities, provided that the appropriate regulatory framework is put in place.

The permanent positive effect of privatization on economic performance is the main substantive argument in favor of improving the markets, as a result of scaling back government involvement in economic activity

\footnotesize{(7) Non-tax revenues}

Under this heading we find a quite heterogeneous mix of sources of government funds. Let us concentrate on two of the most outstanding: income from state-owned enterprises and fees or user charges.

In some countries, public enterprises are an important source of net revenue for the government. For example, in Bolivia the net financial flow from the state-owned enterprises to the government has averaged 7 percent of GDP since 1985. The revenue motive, however, per se does not justify the desirability of this form of financing government spending, since in most cases profits are made on the basis of a monopolistic position, which implies higher prices and potentially large economic distortions. Generally speaking, market activities are better performed by private enterprises, even if regulations from the state are needed.

In the case of some public services, governments may use cost-recovery sources such as fees and charges for services. Education, health and infrastructure utilization are areas where there is some scope for raising fees and charges, both for a revenue motive and for targeting a more efficient resource allocation. Examples are charges on prescriptions or hospital fees, aimed at preventing excessive or inefficient consumption as well as improving the quality of specific public services, or highway tolls and water or electricity tariffs, designed to cover costs. Earmarked taxes, such as gasoline taxes allocated to finance road maintenance, may have similar beneficial effects.

\(^6^9\) This could not be the case if tax holidays and other fiscal advantages are given to the buyer as a part of the privatization deal, as it has been a frequent practice in some developing countries.

\(^7^0\) When privatization does not respond to a performance objective, it may translate into a decrease in government net-worth without any gains to the economy.
The potential room for these revenue sources is likely to be relatively limited in low-income developing countries. At the present, they underuse this revenue source, in the sense that the failure to price some public services leads to insufficient investment, low maintenance and lack of supplies. However, charges may have beneficial effects on quality and costs and constitute an efficient way to raise revenues. Provided that equitable access of the population to public services is properly ensured, the role user fees and similar revenue sources (i.e., ear-marked taxes) should be given more attention.

(8) Quasi-fiscal liabilities

The general desirability of avoiding policy-induced interferences with well-functioning markets has an immediate application to quasi-fiscal activities. As we pointed out in the previous section (see Box 2), quasi-fiscal activities like interest rate subsidies, credit ceilings, multiple exchange rates, and other restrictions on financial markets are equivalent in their effects to taxation of financial sector activities, with large distortionary effect on financial markets (and thus on savings and investment decisions) and little transparency. To the extent that quasi-fiscal activities have negative allocative effects and pose difficulties for fiscal adjustment, their phasing-out, or the transformation of some of them into normal budgetary operations is recommended.

Income distribution and Equity

There is a broad agreement among researchers and policymakers on the view that revenue policies are not, by any means, the most important instruments for achieving income distribution goals or poverty reduction objectives. The expenditure side of the budget is a primary tool in this respect, together with other policies. However, the effect of the alternative sources of financing public expenditures on income distribution must be assessed, to ensure that the revenue-generating capacity of the revenue structure is not in fact plagued with features adversely and unnecessarily affecting equity.

(1) Tax revenues

Taxes should be levied in a fair and equitable way. The precise meaning of this general principle is something to be decided upon by each country. But as a general principle, taxes should not increase income or consumption inequality.

There are very many aspects in the design of a tax system that may affect inequality. Traditionally it has been thought that taxing income is inherently more progressive than taxing consumption, since the personal income tax usually implements graduated tax rates and a standard personal

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71 Another objection raised against charges and other cost recovery schemes is that they can be distortionary ("Economics of the Public Sector", Stiglitz, 1986). Basing fees or taxes on usage may discourage its use, which is inefficient in the case of uncongested public facilities.

72 "Why Poor Countries Rely Mostly on Redistribution In-Kind", Bearse, Glomm and Janeba (2000), show that poor countries rely more on redistribution in kind (public service) than rich countries because of their relatively inefficient tax collection techniques. If tax collections are poor, the quality of service will be low, and the richer households in poor countries will opt out of the public service, while remaining in the tax net. Anticipating this, and taking into account that the richer may benefit more from money transfers (due to informational problems), a government that designs policy in accordance to the median voter preferences will redistribute mainly in-kind.
exemption, while rate differentiation in consumption taxes according to income or wealth of individuals proves difficult or even infeasible.\(^{73}\)

Tax incidence studies of developing countries tend to reaffirm this impression: almost all income tax systems are found to be progressive, while only a minor part of overall tax systems share this feature.\(^{74}\) This finding comes as no surprise, since developing countries have a tax structure dominated by indirect taxes, with a limited number of capital and wealth taxes. Progressivity is further limited by payroll taxes where they are in place.\(^{75}\) Besides, when only wage earners pay taxes while there is widespread informality and large tax payers do not comply with the income tax, payroll taxes become a “tax on honesty” paid by the low/middle income class.

Econometric estimates of Gini equations confirm the regressive nature of consumption taxes in developing countries.\(^{86}\) An increase in the overall tax ratio keeping constant the direct-indirect tax ratio increases inequality.\(^{76}\) At the same time, a revenue neutral (i.e., keeping constant the overall tax ratio) increase in the direct tax ratio to reach the average level of industrial countries (from 0.8 to 1.2) reduces the Gini coefficient by less than 1 per cent. The magnitude of the progressive impact of direct taxes in developing countries is much smaller than that measured in industrial countries, a result suggesting that not much can be gained in redistribution even from large tax restructuring in favor of direct taxes.

To a large extent, the small progressive impact of direct taxation can be traced back to deficiencies in the design of the personal income tax. In effect, when the level of the personal exemption is too high (in many countries the standard exemption amounts several times the country's per capita income) and when a large number of deductions and exemptions are in place (for example, education and medical expenses, financial income, capital gains, and so on), most of them benefiting those with higher incomes, progressivity of the tax system is severely undercut.

The foremost role of taxation is to generate a non-distortionary, non-regressive, stable and sufficient source of revenues, taking into account administrative capacities, which may recommend the use of presumptive or simplified tax regimes for small businesses. By generating enough revenues, a well-designed tax system helps to prevent spending cuts or increases in inflation, both of which may harm the poor. Apart from this indirect effect of the tax system on poor households, the specific design of its detailed features should contribute to reduce inequalities and lift burdens off the poorest households, while promoting a larger measure of horizontal equity (i.e. equal treatment of those with similar ability to pay) and greater efficiency.\(^{77}\)

Broad based tax systems, with fewer deductions and exemptions (apart from a personal exemption not larger than per capita income), relatively low tax rates (albeit moderately progressive in the case of the personal income tax), and compatible with administrative capabilities, are likely to provide a stable, reasonably efficient and pro-poor alternative for financing public expenditures.

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\(^{73}\) This view is reinforced by the fact that the poor tend to consume a larger part of their income than the rich households.

\(^{74}\) "Income Distribution and Tax and Government Social Spending Policies in Developing Countries", Chu, Davoodi and Gupta (2000) review five surveys of tax incidence studies for developing countries.

\(^{75}\) This is due to the fact that payroll taxes fall on wages and tax rates are usually proportional and subject to a ceiling. See Chu, Davoodi and Gupta (2000).

\(^{76}\) However, it's possible to make indirect taxes less regressive by, for example, applying a zero rate on basic consumption goods.

\(^{77}\) See Thirsk (1997a) for country-specific examples.
(2) Internal Debt

The use of internal debt may negatively affect the poor through the interest rate and the credit channels. If debt emissions put upward pressure on interest rates, private investment and private jobs will be crowded out. In addition, when credit constraints are widespread and acute, purchases of public bonds by the financial system —whether compulsory or not— will further limit access to borrowing by the lower-income groups.

(3) External Debt

The redistributive effect of external debt and foreign grants remains dependent on the use of funds by recipients, as well as on the evolution of international interest rates and foreign exchange rates. Conditionality and ownership are the key variables in this respect. If we accept that sound policies are good for the lower-income groups (in the next section we explore the main channels through which these beneficial effects take place), empirical evidence points out that foreign grants and the grant component of concessional loans are only effective when good policies are in place. But only for multilateral aid, and for the World Bank part of that, there is a significant positive association between policies and aid allocation. Over the 90s this allocation of aid has improved through sharp cuts in countries with poor policies.

As to the role of external sources of financing as a mechanism of counteracting shocks in poor countries, to the extent that new aid and external finance is redirected towards countries with good policies suffering those shocks (terms of trade shocks, growth shocks, interest rate shocks, or exchange rate shocks), the effectiveness of external finance will be greatest.

(4) Inflationary finance

From the equity viewpoint, the inflation tax is the worst possible way of financing expenditure programs. Inflationary finance lacks transparency and predictability; and it is so highly regressive that has been labeled “the cruelest taxes of all”. In effect, it is now well documented that inflation has adverse effects on incomes of the poor over and above their effect on mean income.

When governments use their ability to monetize the deficit, the ensuing inflation will induce households to reduce their demand for real balances in favor of other liquid assets (for example, interest-bearing deposits, foreign money, and so on), not always succeeding due to financial

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78 See “Aid, Policies, and Growth”, Burnside and Dollar (2000). This evidence has been recently challenged, but the beneficial effect of aid and good policies remain a robust finding (see above).

79 According to “When is Foreign Aid Policy Credible? Aid Dependence and Conditionality”, Svensson (2000), there is a moral hazard problem adversely affecting recipient government’s incentives to alleviate poverty. In principle, conditionality could solve the problem, but this requires a strong commitment ability by the donor. This can be achieved, at least in part, when aid is channeled through an international agency. In equilibrium, the poor will be better off, because recipient governments will exert more effort ex ante.

80 See “Has Aid Efficiency Improved in the 1990s?” Dollar (2000).


82 In “Growth Is Good for the Poor”, Dollar and Kray (2000) find that inflation reduces the income of the poor disproportionately. In the same vein, in “Stabilization Policies, Poverty, and the Labour Market”, Agenor (1998) identifies a negative effect of inflation on poverty rates in a sample of 38 countries. These results are confirmed in an extensive thorough paper by Easterly and Fischer (2001). The primary evidence comes from an international poll of 31,869 respondents in 38 countries: the disadvantaged on a number of dimensions – the poor, the uneducated, the unskilled– are more likely to mention inflation as a top concern. Easterly and Fischer also examine the impact of changes in inflation on direct measures of poverty. They find that inflation tends to lower the share of the bottom quintile and the real minimum wage, while tending to increase poverty.
repression (negative real interest rates) and exchange rate controls that prevent access to foreign currencies by the poorest.

While the wealthier and more sophisticated investors can put their money in a variety of inflation hedges (real estate or foreign assets), the poorest must struggle to stop the fall in the real value of their monetary assets and their wages. The ensuing negative wealth and income effects thus reduce the purchasing power of the poor. In episodes of hyperinflation, as occurred in 1984-1985 in Bolivia, households revert to barter and finance their reduced level of transactions in foreign currencies.

Inflation has further indirect effects, which accentuate the regressive nature of this source of financing. The most important ones are those resulting from the interaction with the tax system. Besides the fact that inflation may feed into itself through the mechanisms of collection lags and the existence of tax rates defined in nominal terms, both of which reduce real tax revenues, and tends to damage horizontal and vertical equity when the personal income tax and the corporate income tax are not indexed. Inflation lifts more workers into high tax brackets and higher interest deductions reduce the size of the profits tax base. Further, the real value of the standard deduction falls, while incentives appear for the provision of fringe benefits for the well off.

Tax indexation, and a well-designed structure of tax revenues, together with other non-revenue policies (for instance, managed financial liberalization, relaxation of capital controls, central bank independence, and the like) are measures that protect the poor against inflation. At the same time, those alternative policies may eliminate the attractiveness or even the possibility of an excessive reliance on inflationary finance.

Further, as the experience of some developing countries shows, inflation may feed upon itself, starting a vicious cycle leading to ever larger, more procyclical and more unpredictable fiscal deficits, as revenues fall (the Tanzi-Oliveira effect) since inflation produces a corrosive effect on the revenue system.

The Tanzi-Oliveira effect may operate under normal conditions as well. Gavin and Perotti (1997) find that in Latin America an increase in the rate of inflation is associated with significantly lower revenues. In order to make the tax system less susceptible to the ravages of inflation, a number of things can be done: shortening collection lags, indexing the bases of presumptive taxes and the rates of unit taxes, and moving to tax assessment in an ad valorem basis. Positive budget errors tend to be more frequent.

(5) Foreign Grants (See External Debt)

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83 The Tanzi-Oliveira effect highlights the impact that tax collection lags might have on Government policy effectiveness. In developing countries, in particular, average collection lags are higher than industrial nations. In the event of an increase in the inflation rate, this lag might lead to a fall in real conventional tax revenue, depending on its magnitude. As a result of the Tanzi Oliveira effect, raising the inflation tax in countries where collection lags are high may be counterproductive, leading to an erosion of fiscal revenues which might even more than offset the increase in the yield of the inflation tax. See Agenor and Montiel (1996) for more detailed explanation.

84 In a sample of Latin American countries, Gavin and Perotti (1997) show that shocks to inflation are procyclical and tend to deteriorate the fiscal balance. Aizeman and Hausmann (2000) provide theoretical arguments and empirical evidence, suggesting that there is a systematic bias for under-projecting the budget as inflation becomes higher.
(6) Privatization

Privatization may help to improve income distribution in four different ways. First, privatization can be made pro-poor in some sectors (i.e. telecommunication services) when cost reductions occur and a well-designed regulation increases access to those goods and services. Second, assigning ownership, tenure, or customary use rights can improve access to land and agricultural production. Third, privatization can contribute to employment creation when the new private companies offer job opportunities to former or new employees. And, in the fourth and most important place, privatization proceeds may temporarily help avoiding reliance on other regressive sources of finance (i.e. inflation), and may liberate revenues that can be used for debt reduction, which ultimately should free up resources to either reduce public debt or increase pro-poor spending, if the priorities of the poverty reduction strategy are well established.

When the privatization process is conducted in such a way that none of the four objectives described above are achieved, the results may be regressive, while also contributing to reduce the government net worth. This could be due to lack of transparency and competitiveness, excessive fiscal benefits attributed to the new private firms, and absence of a social plan absorbing local work force or creation of new monopolies, among others.

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<th>Box 5: Utilities privatization and the poor</th>
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There is a widespread perception that privatization policies hurt the poor. In a recent paper, Estache, Gómez-Lobo and Leipziger (2001) question the naïve acceptance of the proposition that links privatization with harm for the more vulnerable. Following a detailed assessment of the utilities privatization in Latin America, they provide some guidelines to protect the poor:

a) **Privatization strategy.** In general, competition is good for all consumers, including the poor. The only drawback that competition may have is that it generally forces the elimination of cross-subsidies, which may hurt the poor. But, the impact of the general drop in tariffs or the increased availability of services may more than compensate for effects of the elimination of cross-subsidies. Other areas deserve attention: when the poorer households are not connected to the service, the connection targets set prior to privatization may have an important impact on the poor; in setting quality standards the recommendation is to avoid setting targets based on developed country benchmark, because this could make the service too expensive for the poor; finally, attention should be paid to the way a contract or a company is tendered. As regards the poor, tariffs should be chosen as the competitive variable if poor households are connected, while if they are not, choosing investment commitments as the tendering variable is advisable.

b) **Regulatory policy.** Regulators should be reasonably open to new and innovative approaches to solve investment and operational issues related to poorer users (i.e. community participation in the construction and operation of networks, and the like). Regulators should promote competition, since competition often generates services tailored to the needs of the poorer households, and allow the use of innovative tariff structures which may benefit low-income users.

c) **Social policy.** If there is an overriding social concern regarding the impact on the poor of privatization, there is a case for a subsidy scheme. The funding of the subsidies can come from a variety of sources: general tax revenues, charging certain customers a price higher than the cost of service, or establishing a fund whereby all companies

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85 The privatization of SONACOP in Benin gave access to plantations to cooperatives of farmers, and, as a result, productivity increased.
must make a contribution according to some proportional rule. The eligibility for a subsidy can be determined according to some categorical variable (i.e. geographical zones, specific groups). Finally, the object of the subsidy has to be picked. The main options are either the consumption of the service, or the connection costs to the network.

(7) Non-tax Revenues

The distributional implications of non-tax revenues are less direct. The most clear-cut are perhaps those of user fees and other cost recovery schemes. Cost recovery not only helps to improve efficiency –by avoiding wasteful over consumption and inducing lower costs and higher quality- but it is also consistent with the so-called “benefit principle”, a principle of fairness which states that those households who benefit from public action should bear the cost.\(^{86}\)

Clearly, however, the benefit principle is non-beligerant with respect to poverty reduction objectives. Although it is possible (albeit costly) to charge higher fees to services consumed by the rich, there is plenty of evidence that fees and user charges may inhibit access of poor households to basic services (water and energy, education, health care, and transportation).\(^{87}\) In such cases, free (or lower cost) provision is the most appropriate pro-poor option, combined, when necessary, with coverage of opportunity costs (foregone income from child labor, and the like). Special attention should be paid to the suppression of any illegal fees or bribes solicited by corrupt public employees, which would in practice have the same effect (if not worse) on poor people’s exclusion as formal cost recovery schemes.

(8) Quasi-fiscal liabilities

Fiscal adjustment hides risks for the poor when the fiscal deficit, measured conventionally without including quasi-fiscal operations, is reduced by increasing hidden liabilities. Requirements for public financing in the medium/long term are then being ignored when assessing fiscal stability, which may translate into future crisis that will affect the poor unless they are properly protected.\(^{89}\)

3. Effects of Alternative Public Revenue Policies on Growth and Poverty

In Section 3, we focus on the growth channel and its links with poverty, mainly because sound public revenue policies can be primarily thought of as directly supporting economic growth, both in

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86 The benefit principle, or benefit approach, was established following the writings of Wicksell, Lindahl and a group of Italian and Austrian economists in the last decades of the nineteenth century. They argued that the individuals should contribute to the support of government in proportion to the benefit they receive from public services. Under the benefit approach, taxes can be viewed simply as the charge for the provision of services by the government (for a detailed historical review, see “The Theory of Public Finance” Musgrave, 1959). The benefit principle is explicitly adopted in the case of user fees and earmarked taxes (i.e., gasoline taxes to finance roads).


88 This is especially important in the case of safety nets (see section 3).

89 For example, external crises in East Asia revealed the existence of numerous government guaranties to the banking sector that were not reflected in apparently well balanced fiscal accounts. During the crises the poor were hurt mainly in the countries where safety nets to protect them did not exist.
terms of process and quality, insofar as those policies provide stable sources of finance for public services and social capital, reduce distortions to economic activity and promote macroeconomic stability. We also refer to specific pro-poor public policies. However, for a complete analysis of the quality and sustainability of growth, we also would need to consider the other side of the fiscal equation, which deals with how public revenues are allocated and spent. This topic does not constitute the subject of this paper.

3.1. Economic Growth and the Determinants of Poverty

Having dealt with the main effects of revenue policies upon efficiency of resource allocation and inequality, we now turn to an examination of three closely related issues, which share in common their dynamic nature:

Are economic growth and poverty reduction objectives compatible?
How do government policies for pro-poor growth differ from growth policies alone?
What are the effects of alternative public revenue policies on poverty running through the growth channel?

Our considered answer to the first question (are economic growth and poverty reduction objectives compatible?) is “yes”, for a simple reason: many of the determinants of long-run growth and poverty reduction are the same. In other words, pro-poor objectives, in a large sense, do not conflict with the growth objective. The forces underlying growth are central to success in poverty reduction.

Providing an answer to the second question (how do government policies for pro-poor growth differ from growth policies alone) is not a simple task, given the multidimensionality of poverty. Being poor is being unemployed, lacking income, shelter, medical or school services. Being poor is being highly vulnerable to adverse events such as natural disasters, unexpected sickness, school abandonment or violence. Being poor is being voiceless, powerless and ignored by state institutions.

Poverty is determined by the lack of assets with sufficient productivity and stable returns. Among these assets are the following: 1) Human assets (i.e., labor opportunities, skills, good health); 2) Physical assets (i.e. capital, infrastructures); 3) Natural assets (i.e. land); 4) Financial assets (i.e. savings, access to credit); and 5) Social assets (i.e. property rights, civil liberties, and a sound and stable governance of state institutions).

The evidence largely confirms that growth improves the opportunities of poor people (see below) and in the longer run facilitates a reduction in nonincome poverty, as long as growth is generated in a sustainable and equitable manner. The most reasonable answer to the second question is then that pro-poor growth policies differ from growth policies alone in their focus on the quality of growth. Good policies that support growth produce benefits for all, only when they include investment in the social sectors and other measures, such as land distribution or agriculture reforms, promoting equitable benefit of the population from the generation of growth.

Section 3.2 provides an outline of facts and theoretical arguments about the links between public revenue policies, growth and poverty. In an attempt to provide an answer to the third question

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90 For an extensive analysis of the nature, causes and dimensions of poverty, see World Bank, WDR (2001).
above (what are the effects of alternative revenue policies on poverty running, through the growth channel?). Section 3.3 discusses how public revenue policies affect growth through macroeconomic stability and Section 3.4 outlines pro-poor effects of public interventions, with a particular emphasis on revenue policies, as they relate to the quality of growth.

### 3.2. Poverty, Economic Growth and Public Revenue Policies

Economic growth is the single most important factor associated with poverty reduction. If we focus on income/expenditure measures of poverty, there is plenty of evidence that the richer a country is, the higher the average consumption level of the poorest fifth of its population, and the smaller the fraction living on less than $1 a day. Despite some variation around this relationship, the association mentioned above is quite strong. According to a recent investigation covering 236 growth episodes over four decades in 80 countries, incomes of the poor rise with aggregate growth.

This general relationship is very robust: it is no different in poor countries than in rich ones, neither shows significant variation across decades, high or low growth episodes, or even periods of negative growth. There is also a large amount of empirical evidence supporting the hypothesis that just as income poverty declines, so does nonincome poverty, measured by indicators such as access to health and education.

A natural interpretation of these empirical findings could suggest that policies, which support growth, are largely pro-poor. In fact, many determinants of sustainable growth and poverty reduction are in common. Education, medical care, private and public investment, and the like, are among the assets that promote the basis for both poverty reduction and sustainable growth.

However, two caveats are in order. First, the causality may be bi-directional. In other words, there are instances in which poverty and inequality undermine or impede growth, due to insufficient savings, waste in human potential, and social unrest and political instability. This means that without measures targeting the poor directly – for instance, through investment in education, safety nets or transfers - measures to boost private investment and hence growth may be jeopardized.

Secondly, there are deviations from an average one-for-one relationship between growth and incomes of the poor. These deviations reflect a complex set of interrelationships between growth patterns, institutions and public policies. Thus, besides the growth channel, public policies have a distributional impact on the poor. We will turn to these effects in Section 3.4.

What drives growth? Answering this question is necessary for a correct understanding of pro-poor fiscal revenue policies. At the same time, it is quite a difficult task. In effect, divergences in growth rates across countries are interpreted as the outcome of some of the following factors: a) Geography and natural resources; b) History, culture, and religion; c) Socio-political

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92 These are the main results of the econometric study performed by Dollar and Kray (2000).
93 See World Bank, WDR (2001) and references therein.
94 According to “Globalization and Patterns of Economic Development” Sachs (2000), “the most favored countries are able to achieve catching-up growth on the basis of a diffusion of technologies into these economies, often supported by large capital inflows. Other countries, however, are too geographically isolated, or too subject to disease, or too dependent on a few primary commodities to achieve catch-up growth, much less endogenous economic based on home grown innovation”.

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institutions, leading to political stability, effective conflict resolution, absence of corruption and transparency\textsuperscript{96}; d) Economic institutions, like legal security for property rights and market-oriented regulations; e) Environment for private investment; f) Human capital (school enrollment, health indicators); g) Total factor productivity; and h) External shocks. Finally, public sector policies interact with all the elements listed above. Among them, we may distinguish between legislation and regulations \textit{(the state as a promoter)}, and macroeconomic policies, \textit{(the state as a provider)} of which government spending and alternative sources of \textit{fiscal revenues} constitute the two main fiscal policy tools. This list is not exhaustive, as the vast empirical literature illustrates\textsuperscript{97}.

For simplicity and concreteness, we may think of the contribution of fiscal policies to growth in terms of a simple growth equation derived from the classical production function:

$$G = \alpha A + \beta K + \gamma H + \epsilon \quad (6)$$

Where $G$ is total output growth, $A$ represents factors influencing total factor productivity, or efficiency, (for instance, culture, geography, technical progress, institutions, government policies, and so on), $K$ is the growth rate of physical capital (private and public), $H$ stands for changes in human capital (labor, skills, health), and $\epsilon$ is a random shock to growth (i.e. natural disasters, wars, and the like). It is clear that growth can occur only if efficiency, the stock of physical capital and the stock of human capital increase over time\textsuperscript{98}. In this elementary framework, fiscal policies affect growth by influencing $A$, $K$ or/and $H$.

This having been said, how could we characterize \textit{pro-growth fiscal revenue policies}? In general, the revenue side of fiscal policy can positively affect growth in three main ways: a) Providing a financing capability that can be used to pay for the provision of basic public services, such as physical capital (basic infrastructure) and human capital (education and health care) among others, in benefit of the poor; b) Minimizing the negative effects of public intervention on efficiency, measured by the $A$ term; and, c) Minimizing distortions to capital accumulation and the labor market, measured by the $K$ and the $H$ terms, and to economic activity more generally (risk-taking, technical advance, protection of property rights, and the like) which are reflected in the $A$ term.

As noted earlier, government policies may have \textit{growth effects} as well as distributional or \textit{pro-poor effects}. The former are those effects of government policies, which are distributionally neutral (i.e., growth works in the benefits of the poor and the non-poor alike). The latter include those effects of government policies, which are biased in benefit of the poor, even if they may not have a well-defined effect on economic growth.

Following this distinction in our analysis of the dynamic impact on poverty of alternative fiscal revenue policies, we first focus on the growth effects. These are channeled mainly through the influence of public revenue policies upon macroeconomic stability (Section 3.3) and also through the specific ways in which different types of public revenues affect incentives and the functioning

\textsuperscript{95}See “I Just Ran Four Million Regressions”, Sala-i-Martín (1997).


\textsuperscript{97}In “Economic Growth” Barro and Sala-i-Martín (1995) provide a review of the evidence.

\textsuperscript{98}In fact, with decreasing returns to capital, in the long run the economy will converge to constant labor-capital ratios, implying that additional growth will take place only through the $A$ channel. However, even once-and-for-all changes in the levels of human or physical capital or in the state of technology will affect growth rates for a significant period of time, because adjustments in accumulable factors are sluggish (see Barro and Sala-i-Martín, 1995, and Gerson, 1998).
of the markets, an efficiency matter already covered in section 2.2. Finally, we will emphasize (Section 3.4) the main pro-poor effects of public revenue policies in connection with the equity effects previously analyzed in section 2.3.

3.3. Macroeconomic Stability, Growth and Poverty

Macroeconomic stability is a situation where key aggregate economic relationships (external balance, fiscal balance and so on) are broadly in equilibrium, in such a way that when imbalances exist they can be financed in a sustainable fashion. Stability reflects itself in sustainable debt policies, low inflation, stable exchange rates and fiscal accounts close to balance.

Is macroeconomic stability conducive to sustained growth? The answer is undoubtedly “yes”, insofar as instability can severely distort economic decisions relevant to capital accumulation and technical advance. Instability means uncertainty, lack of predictability, and risks to sustainability of policies in the future. Macroeconomic instability also means blurred price signals.

Sound macroeconomic policies –which are stable and predictable, while at the same time provide room to accommodate transitory shocks– are conducive to economic growth in several ways. Fiscal, monetary and exchange rate discipline provide a form of insurance, insofar as discipline implies the regular absence of policy shocks and could help to cushion other internal or external exogenous shocks. Secondly, good macroeconomic management promotes productive activities, inasmuch as it promotes stability, while improving the profitability of investments. Besides these effects, which influence growth through the \( A \) factor, sound macroeconomic policies also boost \( K \) and \( H \), as risk premiums fall to a minimum.

Empirical studies have found support for the hypothesis of a positive effect of macroeconomic stability upon growth, running through both the efficiency and the accumulation channels. The main findings of this work can be summarized as follows. High inflation, often accompanied by price fluctuations and relative price changes, slows down growth. The negative correlation between inflation and the growth rate is quite strong even in low-inflation countries.

Deficits also inhibit growth through different mechanisms (crowding-out, financial repression, uncertainty about future taxes and inflationary financing). Volatile and overvalued exchange rates reduce growth, as they impede a proper allocation of capital between the tradable and the non-tradable sectors, and deter inward foreign capital. Finally, although results are less robust, high and excessive levels of external debt constitute an impediment to growth, both by increasing the risk of external crisis, creating moral hazard and also by making more uncertain the return to business investment.

Fiscal discipline is good for growth not only because it provides macroeconomic stability and promotes growth, but also to the extent that it helps improving the functioning of the markets. Besides their crowding-out effects, large fiscal deficits often signal an excessive government

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\(^{99}\) Sustainability is the ability to service debt without an ever rising debt-GDP ratio, and the corresponding ability to maintain revenue and spending policies over time without severe and unpredictable changes.

\(^{100}\) Among the most interesting studies covering developing countries are those by Fischer (1991, 1993), Motley (1994), Bleaney (1997), Ghosh and Phillips (1998), and Burnside and Dollar (2000).

intervention in the economy. The ensuing increase in uncertainty hampers the functioning of private markets, particularly so in the case of financial markets.

When faced with the need to design a fiscal revenue policy conducive to macroeconomic stability, what can be done? We attempt to respond to this question in this section.

Tax revenues should contribute as much as possible to finance the bulk of spending in normal times, leaving a minor role to other sources of public finance. In other words, the design of the tax system should avoid present and future deficits\(^{102}\). Besides its revenue-generating capacity, the tax system should be stable, thus minimizing uncertainties about future tax changes. Stability is ensured by avoiding reliance on vulnerable tax bases (for instance, taxes on external trade), cultivating domestic tax bases (broad-based taxes on income and consumption) and ensuring compatibility with tax administration capabilities.

Poor countries with weak tax administrations should be better able to apply indirect taxes, and perhaps wealth taxes, than income taxes. Further, a good tax system also contributes to macroeconomic stability if revenues keep pace with economic activity (the flexibility principle) and are not as vulnerable to inflation (indexation) as other sources of income.

When tax revenues reveal systematically insufficient, large fiscal deficits result. During the 80s a significant number of developing countries financed public deficits to a large extent by monetary growth, i.e. through the inflation tax. The adverse effects of rapid, high, unexpected or volatile inflation on the level of output and its rate of growth are by now quite well known\(^{103}\). Inflation negatively affects growth because, as both a source and an outcome of instability, it deteriorates total factor productivity and discourages accumulation of productive factors.

Among the costs in terms of growth arising from inflation, we can refer first to the extensive effects working through the “\(A\) channel”. Most of these originate in the fact that inflation impedes a proper functioning of the markets, an issue that we analyzed in Section 2.2.

Inflation has also a bearing on the accumulation of productive factors. As to the “\(H\) channel”, the accumulation of human capital may be harmed for reasons linked to the deterioration of income distribution and the tighter borrowing constraints facing poor households. Labor supply could be affected as well, to the extent that inflation may distort the relative price of leisure in terms of consumption goods.

Finally, high and variable inflation could reduce the accumulation of physical capital –the “\(K\) channel”- in various ways. For instance, interest rates increase as risk premiums rise, thus discouraging domestic capital accumulation. Foreign capital inflows may results also inhibited, as high and variable inflation gives rise to uncertainty upon the future course of monetary policy.

All in all, we may conclude that macroeconomic instability can severely impair growth. Fiscal accounts close to equilibrium, and low and stable inflation rates are key elements for high growth rates, and an essential component of poverty reduction strategies. The best contribution of revenue policies to this objective should be the implementation of a well-designed tax system that avoids increasing deficits and inflationary finance.

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\(^{102}\) See Thirsk (1997a).

3.4. Pro-Poor State Interventions

Pursuing sound macroeconomic policies and removing market distortions have favorable effects on the poor in the medium and the long run through the growth channel. Important as it is, the pure growth-induced improvement of the poor obscures three important issues. First, the quality of growth is important. Second, some revenue policies are super-pro-poor, in the sense that they help economic growth by correcting market failures that particularly affect the poor, or by redistributing income or wealth towards the poor. Finally, revenue policies should ensure as much as possible the availability of public funds that can be used to benefit the poor.

The Quality of Growth: Improving fiscal management and promoting efficiency is good for growth, but by themselves are not enough to ensure the quality and the sustainability of growth. Many other actions, most of them non-revenue measures, structural by nature, have to be adopted: fighting corruption, improving governance, giving access for the poor to education and social services, and promoting productive activities and employment in sectors where the poor work, among others.

Super Pro-poor Policies: Reducing poverty may be a precondition for growth. In effect, to the extent that some market imperfections disproportionately affect the poor, removing this failure directly, or alleviating its effects through the appropriate design of revenue policies, may be necessary for growth while benefiting the poor in a more than proportional fashion.

Revenue policies, which are super-pro-poor in this sense, are, for example, tax policies that alleviate the burdens on the poor (either through income tax exemptions, or through low or zero-tax rates on purchases of basic goods, or even through free access to education, health, and social services) and deficit finance policies that avoid inflationary finance. This is not to imply that redistribution is always beneficial for growth. But it remains true that growth cannot be sustained without eliminating powerful obstacles to asset accumulation by the poorest.

Pro-Poor Expenditure Policy Choices: Having the appropriate inter-sectoral and intra-sectoral composition of expenditures (reflecting poverty reduction strategy priorities), and including social safety nets (labor-intensive public works, nutrition programs, cash transfers, free access to services, and so on) in the budget is of crucial importance to benefit the poor.

There is not a universally accepted formula for doing this in practice, local tradition and other circumstances being of foremost importance. However, it remains true that sound fiscal policies may help, both indirectly –counter-cyclical budget policies smooth out disposable incomes- and directly, if a credible compromise of the use of government windfall savings during good times to finance pro-poor expenditures can be reached.

In the case of many developing countries where foreign aid represents a high percentage of total public spending, the most credible compromise comes in the form of improvements in public policies and in the quality of governance. As pointed out in Section 2, when foreign aid and new

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105 Dollar and Kray (2000) find strong pro-poor effects associated to reductions in the rate of inflation.
106 To the extent that redistribution implies higher taxes and lower savings rates, reducing inequality may diminish growth. The empirical evidence is ambiguous (see “Inequality, Investment, and Growth”, Barro, 1999).
107 The impact of good governance appears to be progressive, egalitarian, and pro-poor (see “Aid Dependence and the Quality of Governance: Cross-Country Empirical Tests”, Knack, 2001). Thus, tying
external finance contributes to implementing desirable reforms, the growth effect of external finance is maximized. Links to poverty targets could provide insurance to countries suffering from shocks, thus facilitating the financial viability of safety nets. This link between external funding (debt relief) and results in poverty reduction has been incorporated as a key design principle of the HIPC Debt Relief Initiative.

Foreign aid to improvements in the quality of governance (i.e. reducing corruption, improving fiscal accountability, implementing meritocratic recruitment and promotion in the civil service, and establishing independent court systems) is potentially of great importance for reducing poverty.
References


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