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The Distributional Effects of Public Expenditure:
Update and Overview 1/

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Abstract

It is commonly agreed that economic policies, including budgetary policies, can have potentially strong distributional effects. Traditional economic analysis held that economic policies affected the income distribution primarily through their impact on the rate of growth. More recently, it has come to be recognized that qualitative aspects of economic growth are probably more important than the rate of growth itself. While recent research has confirmed the potential role of expenditure policies as a redistributive tool, it has also shown that redistribution does not necessarily have to come at the expense of economic growth and efficiency. Although there are substantial analytical and technical problems to be faced in the design of equitable and cost-effective public expenditure programs, unfavorable distributional outcomes of these programs can usually be traced more to political and institutional pressures than to purely technical factors.

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Summary

Traditional economic analysis holds that the process of growth and economic development is necessarily accompanied by certain changes in income distribution; consequently, distributional aspects of economic policies have frequently been analyzed in the light of the impact of these policies on the rate of growth. There exists a broad consensus today that economic growth alone is not sufficient to shape income distribution, improve it, or ensure a significant decline in poverty, even though it is commonly agreed that it can play an important supportive role. In addition, it is generally accepted that a high degree of inequality can constrain significantly a country's future economic growth potential and performance.

It is increasingly recognized that, to improve income distribution or reduce poverty, qualitative aspects of economic growth are probably more important than growth in itself. In this context, the distributional effects of public expenditure policies and the composition of public expenditures have received considerable attention in recent years. This paper notes that, in contrast to traditional economic analysis, research has shown conclusively that there is not necessarily, and not even usually, a trade-off between redistributive and efficiency goals in public expenditure policies, particularly over the medium and long term. Therefore, such policies can help mitigate or avert a typical Kuznets process (so that, in the process of economic development, the distribution of income does not need to get worse before it can get better), and they can do so without necessarily restricting future economic growth.

However, devising expenditure policies that are cost-effective and equitable, is complicated by a number of analytical and technical problems. Among the most common are identifying the beneficiaries of public expenditure programs; valuating the benefits provided by those programs; defining the time horizon for assessing redistributive effects; assessing the role of market imperfections; and addressing data limitations, and, in particular, adequately accounting for the informal sector.

These problems notwithstanding, this paper argues that unfavorable distributional effects of public expenditure programs rarely reflect problems of policy design; usually they are the result of political and institutional pressures and constraints that hamper redistributive efforts. To address the political economy problem of public expenditure reform, it is important to design policy measures in such a way that they can be supported by a relatively broad constituency, and to limit the scope for various interest groups to use the budget process as a battleground for special interests.



The Distributional Effects of Public Expenditure: Update and Overview

I. Introduction

In a seminal 1974 study on "Redistributing income through the budget in Latin America," Vito Tanzi noted that "still relatively little has been done to estimate the incidence of public expenditures; this is indeed relatively virgin and largely uncharted territory." Since then, significant progress has been made, and, particularly the most recent years have witnessed an increasing analytical focus on distributional effects of public expenditure.

Not surprisingly, the reasons why distributional issues are once again a much debated policy topic differ from country to country. Formerly centrally-planned economies have, generally, experienced a worsening of distributional disparities in their transition from plan to market. While it is increasingly recognized in these countries that economic efficiency calls for differential rewards to different productivity levels, and that this is incompatible with distributional equality, 1/ it is also clear that distributional issues have contributed to increased social tensions, and created difficult policy choices for policy makers in transition economies. In industrial countries, policy makers face distributional issues particularly in the context of the fiscal adjustments and consolidations required by aging populations, which necessitates overhauling the traditional welfare state institutions, and searching for more cost-effective ways to provide social protection, and health and other social expenditures. In developing economies, there is increasing recognition that the existing distribution of income, 2/ and, particularly, the very low living standards of the poorest segments of the population, are potentially destabilizing and may adversely affect the future growth potential of the economy. To address this problem, it is necessary to design and implement policies that promote a sustained improvement in the living conditions of the lower income groups while safeguarding macroeconomic stability, and the incentives to work, save, and invest. This is clearly the challenge faced by most governments in Latin America.

The distribution of income--be it, for example, the size distribution, the functional distribution, or the regional distribution--is affected by a

1/ See, for example, Erdos (1991), who stated that, in Hungary, "any reform effort must include an improvement in economic efficiency, and allow for an increase in income disparity, rather than seeking to reduce the degree of disparity."

2/ For simplicity, and if not noted otherwise, the terms "distribution of income" or "income distribution" will be used throughout the paper as generic terms for the distributions of income, wealth, and consumption.

broad range of economic and financial policies. ^{1/} This paper focuses on the distributional effects of a subset of such policies, namely public expenditure policies. The paper is organized around four main issues.

Chapter II discusses the interlinkages between economic growth and income distribution. Chapter III concerns the existence of possible trade-offs between distributional equity and economic efficiency. In particular, it asks whether public expenditure programs can be designed to improve both the distribution of income and the economic growth potential of an economy, or whether there is necessarily a trade-off between policies that foster growth and those that promote distributional equity. Chapter IV reviews some main analytical and technical aspects of assessing distributional effects (or incidence) of public expenditures. Chapter V discusses political economy aspects of reforming public expenditures. Finally, Chapter VI provides some concluding observations.

II. Economic Growth and Income Distribution

Traditional economic analysis holds that the process of growth and economic development is necessarily accompanied by certain changes in the income distribution. Distributional aspects of economic policies were frequently analyzed through their impact on the rate of growth: to understand distributional outcomes of expenditure policies, for example, it was important to understand their linkages with economic growth.

This chapter briefly reviews the literature on the effects of economic growth on income distribution, and the more recent research on the effects of income distribution on economic growth. Given the vast amount of research in this area, this overview has to remain rather cursory.

1. How does economic growth affect income distribution?

During the past four decades, much of the research on the relationship between economic growth and distributional equity has been influenced by Kuznets' (1955) well-known inverted U-curve hypothesis. Research on this

^{1/} This paper largely focuses on the size distribution of income, i.e., how many persons (or households) receive how much income. In contrast, the functional distribution of income shows income according to source, i.e., labor, capital, land, or transfers. The functional distribution played an important role in classical economics, as it reflected the notion that laborers, capitalists, and landowners were distinct and rather homogeneous classes. Nowadays, however, the principal source of inequality in most countries is that some persons (or households) receive more income from the work they perform than others, and the classical assumption of within-group homogeneity is no longer tenable (Fields (1989)).

hypothesis is still continuing, and even on its 40th anniversary, the empirical evidence remains unclear. 1/

The basic message of the Kuznets hypothesis is that, in the course of economic growth and development, income inequalities must get worse before they get better. A more extreme view suggested that rapid growth and industrialization may even be accompanied by an increase in poverty (the so called immiserizing growth hypothesis). Echoes of the Kuznets hypothesis can still be heard in more recent versions of "trickle-down economics," where growth, without active redistributive policies, is assumed eventually to reduce poverty and improve the income distribution.

Many researchers have found empirical support for the Kuznets hypothesis, often on the basis of cross-section data. 2/ However, as suggested by Clarke (1992), such cross-section results should not be interpreted as strong evidence for what is essentially a time-series relationship; nor do they imply that development policies should focus primarily on economic growth.

Particularly in recent years, however, researchers have become increasingly critical of the Kuznets hypothesis. This critique has taken three basic forms, which are largely complementary as they all imply that countries can preclude or mitigate Kuznets' deterministic process of economic development by adopting the right policies, particularly in the public expenditure area.

First, it has been argued that the real question about the inverted U-curve is not whether it exists, but whether it can be avoided (Fields (1989)). A general conclusion of this research is that it is indeed avoidable, also because, across countries, only a small part of the variance in relative inequality can be explained by the income level. In general, this research--which also includes Kuznets' (1966) later writings--largely confirms much of the earlier studies on the Kuznets hypothesis, which submitted that the income distribution is determined at least as much by the type of economic development and the policies followed in each country as by the level of development (Fields (1989)). An interesting extension in this context is the study by Medici and Agune (1995), which provides examples of the distributional impact of different economic development policies based on a review of the distinct patterns of regional growth and inequality within a single country, Brazil.

Second, different amended versions of the Kuznets hypothesis have been proposed that usually fit the available data better than the original

1/ For a survey of the literature see Adelman and Robinson (1989). For more recent examples of this research, see, for example, this year's publications by Ogwang (1995), Park and Brat (1995), and Ram (1995).

2/ See, for example, Clarke (1992), Randolph and Lott (1993), Ogwang (1995), and Ram (1995).

version. For example, Fishlow (1995) has suggested that failure to find support for the Kuznets hypothesis does not necessarily imply that the initial Kuznets hypothesis is inherently incorrect, but may just reflect the fact that substantial government intervention in the economic system has diluted its effects. He went on to argue that inequality varies systematically and in a predictable manner with respect to a series of development-related factors, like, for example, secondary school attendance or past population growth. Similarly, Milanovic (1994) has asserted that "social choice" is an important factor in determining income distribution. Based on cross-section data for 80 countries, he argued that, within the limits imposed by each country's economic circumstances, societies have sizeable discretion and choice over the degree of income inequality, that the importance of social choice increases as income increases, and that, as income increases, societies' preferences for policies that reduce income inequality also increase.

Third, a more radical critique has suggested that there is no empirical support at all for the Kuznets hypothesis. For example, on the basis of cross-section data from 63 surveys, spanning the period 1981-92, and covering 44 countries, Bruno, Ravallion, and Squire (1995) found that "in no case was there evidence of an inverted U." They went on to argue that the apparent confirmation of the Kuznets hypothesis in earlier cross-section studies was largely due to biased estimates, and showed that this could already occur when the inequality indicators used were, for some countries, derived on the basis of income, and for others derived on the basis of consumption. Similarly, using time-series evidence for 42 developed and developing countries for the period 1950-90, Bruno, Ravallion, and Squire (1995) found that "32 of the countries do not reveal any systematic relationship between growth and inequality" and that "very few developing countries have followed a pattern which could be said to conform to Kuznets' prediction of initially rising inequality."

Similarly, Anand and Kanbur (1993), showed that the choice of the specific inequality index, i.e., the dependent variable in econometric tests of the Kuznets curve, significantly affected the conclusions on the inequality-dependency relationship. While, on the basis of the cross-section estimates presented by Anand and Kanbur one can comfortably reject the hypothesis that all countries follow the same Kuznets process, the possibility remains that each country follows a different Kuznets process, or that it does not hold at all, at least for some countries.

In addition, the empirical evidence on the extent to which following growth-oriented policies is important for achieving distributional equity remains mixed. Fields (1989) suggested that a high aggregate growth rate is neither necessary nor sufficient for reducing either absolute or relative poverty; his argument rested largely on the case of Sri Lanka during 1953-1973, which managed to reduce absolute and relative poverty, notwithstanding low growth rates. Contrary to Fields (1989), Tanzi (1995) suggested that "economic growth is necessary...for reductions in absolute poverty. However, it may not be sufficient...to improve the distribution of income."

There exists a broad consensus these days, that economic growth alone is not sufficient to improve the income distribution or even just to ensure a significant decline in poverty. Tanzi and Chu (1992), for example, on the basis of a simple simulation exercise that used parameters drawn from Latin American countries, concluded that, even if aggregate income would grow by 5 percent a year and with no redistributive policies by the government, it may well take 30 years for an average poor person to attain an income level equivalent to the poverty line. Similarly, Altimir (1994) argued that, while during the debt crisis of the 1980s most Latin American countries experienced increases in income inequality and poverty, the subsequent economic recovery and growth did not improve the income distribution, except in some countries, like Colombia, where social and distributive objectives were given a relatively important weight in the design of the economic adjustment and recovery programs.

While the extent to which economic growth is a necessary precondition for addressing distributive issues still remains unclear, there is also broad agreement that it can play an important supportive role. Morley (1992), for example, in reviewing the effects of structural adjustment on poverty in Latin America, suggested that "economic growth is a potent force for poverty reduction," as evidenced by the facts that: (i) rapid economic growth before the debt crisis of the 1980s was accompanied by a decline of poverty (although not of income inequality) in most Latin American countries; (ii) the recessions accompanying macroeconomic adjustment resulted in a marked increase in poverty, especially urban poverty, in the region; and, (iii) poverty declined again in the recovery period after the adjustment.

2. How does income distribution affect economic growth?

More recently, attention has shifted from the distributive implications of economic growth to the growth implications of a given income distribution. This has been motivated by the endogenous growth theory, which postulates that economic growth is the endogenous outcome of an economic system, not the result of exogenous factors. In general, research in this context has emphasized private sector choices and public sector policies, including distributive policies, that cause the rate of economic growth to vary across countries. ^{1/}

There are three main channels through which the distribution of income can affect economic growth. First there is the "savings channel," which suggests that inequality can promote higher savings and investments, and therefore economic growth, since the rich save more than the poor. Second, there is a "fiscal channel" which suggests that the more pronounced the existing income inequalities, the higher the demand for redistributive fiscal policies. This, in turn, may lead to the emergence (or worsening) of budgetary imbalances, and thereby endanger macroeconomic stability and

^{1/} See, for example, Romer (1994) for an introductory overview.

sustainable growth. Third, there is the "political channel" which suggests that income inequalities foster social discontent and unrest, and that the associated threats to property rights, policy volatility, and government fragility depress productive investment, promote capital flight, and thereby reduce economic growth. 1/

Particularly the last issue, namely whether and to what extent a high degree of inequality has a strong limiting effect on a country's future economic growth potential and performance, has recently attracted much attention. 2/ Galor and Zeira (1993) suggested that a more equal income distribution, or, as they put it, a large middle class, has a positive impact on economic growth; Clarke (1992) showed that this relationship may be relatively small, though statistically significant. Rodrik (1994) has suggested that different levels of initial income inequality may help to explain the more successful experience of East Asian countries, relative to Latin American countries, in terms of economic growth and macroeconomic stability.

III. Distributional Equity and Economic Efficiency

It is increasingly recognized that, to improve income distribution or reduce poverty, qualitative aspects of economic growth are probably more important than economic growth per se; since the quality of economic growth depends crucially on economic policies, public expenditure policies, an important component of overall policies, and the composition of public expenditures have been the focus of much research attention.

Much of this research has emphasized that there is not necessarily a conflict between explicit redistributive policies and policies that foster economic efficiency and growth. Tanzi and Chu (1992), for example, noted that inadequate nutrition, health and education may easily become binding constraints in the work efforts of the poor, and that improvements in these areas would enhance labor productivity, and raise the growth potential of the economy. Similarly, the World Bank's 1990 World Development Report suggested that countries which were most successful in attacking poverty and reducing income inequalities promoted efficient use of labor, and investment in the human capital of the poor.

These arguments are in strong contrast to traditional economic analysis, which emphasizes efficiency-equity trade-offs. In particular, traditional analysis holds that redistributive policies may adversely affect economic efficiency (and therefore economic growth prospects) as they may reduce work effort, and, as the poor have a lower savings rate than the rich, reduce aggregate domestic savings and, thus, the resources available for investment.

1/ Also see, for example, Alesina (1995), Alesina and Rodrik (1994), or Persson and Tabellini (1994) for an overview.

2/ For a survey of this recent literature see Alesina and Perotti (1994).

These efficiency-equity trade-offs--which gained prominence with the works of John Rawls (1971) and Arthur Okun (1975), and have become a mainstay of many public finance textbooks, such as Hyman (1993)--may have been exaggerated, both in theory and in practice.

In theory, the conceptual links between efficiency and equity are fairly weak; ex ante, different degrees of efficiency or inefficiency are consistent with different degrees of equality or inequality. Furthermore, changes in efficiency, at least in the Pareto sense, cannot be measured independently of subjective "perceptions" or, more precisely, independently of people's utility functions. 1/ A priori, there is no clear relationship between the efficiency implications of equity-enhancing redistributive policies and the subjective perceptions of these policies. For example, the same policy could generate substantially different efficiency outcomes, depending on whether everybody would feel better or worse off if the income distribution were more equal. 2/ Also, equity-enhancing redistributive policies are, to some extent, a public good, and government intervention is necessary to guarantee an optimal degree of redistribution. With no government coercion, an average rich person would likely want to give up less income than what would be considered optimal; the government would need to use its coercive power to bring about a desired redistribution of income.

In practice, there exists substantial scope for improving both cost-effectiveness and distributional equity by changing the design of public expenditure programs, for example, by eliminating waste. There are numerous, examples of public expenditure programs that do not have a clear efficiency rationale, do not appear very cost-effective, and mainly benefit the nonpoor. In fact, it is probably because of the more blatant examples of such programs that expenditure policies are often fairly easy targets for humorous exploits. In one of those, O'Rourke (1992), for instance, notes that "the annual subsidy for each American dairy cow is between \$600 and \$700--greater than the per capita income of half the world's population," and similarly pokes fun at the fact that the U.S. Department of Agriculture "is spending \$10 billion a year to increase farm income, [while] ...spending

1/ Efficiency is commonly defined in terms of Pareto improvements. Since Pareto improvements depend on utility functions, in practice, efficiency considerations have often been replaced by the more narrow concept of cost-effectiveness, i.e., that a given redistributive policy goal, is achieved at the lowest possible cost.

2/ This is similar to Milanovic's (1994) "social choice" argument, noted above. Still, in any given situation and with given resource constraints, redistribution means that income or rents are taken away from one group of people and given to another group of people. Such a redistribution could only result in a Pareto improvement if those who lose income were altruistic, i.e., when the utility of those who lose income also depends positively on the utility of those who gain income.

\$20 billion to make food affordable to poor people through the Food Stamp program," instead of just giving \$10 billion to poor people.

In a more serious vein, and even more forcefully, the papers presented in the VIIth CEPAL seminar provide some good examples for seemingly wasteful expenditure. For instance, Vélez (1995) draws attention to subsidies for household energy consumption in Colombia that absorb substantial resources without even a minimum of targeting; Rodríguez González (1995) shows that public education expenditures in Peru tend to promote existing inequalities by disproportionately benefiting the nonpoor. Such inequitable distributive outcomes of expenditure policies are not exceptions, and they are not only confined to developing countries. ^{1/} The important thing to point out about all these programs is that money saved by eliminating wasteful expenditure could, for example, be used to expand targeted anti-poverty programs.

But equity can be enhanced not only by eliminating obvious waste, but also by improving the distribution of opportunities, for example, through access to decent education and health care. While Harberger (1995) has suggested that "it takes great effort to keep the educational system from being, in one way or another, a regressive transfer mechanism," it seems that an important first step towards making the education system less regressive would be to improve opportunities, particularly by improving access for the poor. Improving the distribution of opportunities may also require specific policy measures, such as improving the regional distribution of government expenditure.

Birdsall and James (1993) showed that inefficiencies are particularly prevalent in education and health, including: (i) free (or nearly free) education at public universities in which as many as 95 percent of students may come from middle- or upper-income groups, and which absorb a large share of the total education budget at the expense of primary and secondary education; and (ii) free (or nearly free) provision of hospital services (including expensive high-technology procedures), which are usually located in urban areas and not readily accessible for the rural populations, and preempt resources for the provision of basic health care to rural areas that are often plagued by high mortality rates. Pradhan (1995) showed that government health and education expenditures usually benefit the nonpoor disproportionately: only in few countries did the poorest 40 percent of the population receive more than 50 percent of the benefits.

The critical trade-off, then, is not between economic growth and distributional equity or between economic efficiency and distributional equity, but between policies that enhance cost efficiency and those that do not, and between policies that benefit the poor and those that do not. In many cases, implementing cost ~~recovery~~ policies would promote cost

^{1/} See, for example, Harberger (1995), or Fiscal Affairs Department (1995).

other merit public goods, and to provide for targeted subsidization of the use of services by those unable to afford them (Birdsall and James (1993)). However, as Harberger (1995) pointed out, successfully implementing such technical solutions requires taking into account political economy problems, such as powerful interest groups that support the status quo.

IV. Assessing the Expenditure Incidence: Analytical and Technical Aspects

Devising the right expenditure policies, i.e., policies that are cost-effective, efficient and equitable is complicated by a number of analytical and technical problems. These can be grouped under the following six headings: 1/

- (i) identifying the beneficiaries of public expenditure programs;
- (ii) evaluating the benefits of these programs;
- (iii) assessing the costs of expenditure programs;
- (iv) setting the time horizon for estimating redistributive effects;
- (v) assessing the role of market imperfections in the distribution of benefits from public expenditures;
- (vi) addressing data limitations, and, in particular, accounting adequately for the informal sector.

1. Who benefits from public expenditure programs?

The degree of conceptual and empirical complexity of identifying the beneficiaries of public expenditures--a necessary first step for assessing the distributional impact of these expenditures--varies according to the type of expenditure.

The most straightforward case is that of direct income transfers to households; the most complex case is that of pure public goods (i.e., goods characterized by non-rivalry or non-exclusive consumption), such as national defense and justice. For direct income transfers, the "only" thing that is needed to identify the beneficiaries is reasonably detailed and reliable household income survey data that map the socio-economic characteristics of recipients of the transfers to the size distribution of income. 2/ For pure public goods, the distribution of benefits should, in theory, be measured on the basis of a person's or a household's marginal rate of substitution between the public good and the composite consumption of all other goods. This approach would imply that one would first need to assume that public goods are provided optimally, then decide on utility functions, and finally allocate benefits on the basis of these utility functions. This procedure is, of course, fraught with largely arbitrary assumptions,

1/ See Catsambas (1988) for a more detailed overview on the analytical contributions to most of these issues.

2/ However, information may not always be available on the distribution of benefits among subgroups of the household sector, e.g., men vs. women, adult vs. children and the elderly, etc..

particularly with respect to the assumed utility functions. But even when public goods exhibit congestion costs, and are therefore no longer pure public goods, measuring their actual distributional effect remains virtually impossible in practice.

Some authors, such as Menchik (1991) or Van't Eind et. al. (1986), simply accepted that expenditures on pure public goods are not "allocable" and, therefore, excluded them from their respective analyses; others, however, have used various allocation formulas, relating, in one way or another, benefits from public goods to something that can be measured. Three common solutions are to distribute benefits from pure public goods in proportion to income, in proportion to wealth, or on a per-capita basis. Each solution has some rationale, although none seems clearly superior to the others. The first approach assumes that public goods are normal goods, implying that, as income increases, people are willing to spend more to obtain these goods. Under this approach, expenditures on public goods simply preserve the existing distribution of income. Given that wealth is usually distributed more unevenly than income, the second approach generally implies a regressive or "pro-rich" distribution of public goods across income groups. ^{1/} The third approach, which distributes benefits on a per-capita basis, i.e., independent of income, usually results in a pro-poor distribution of the benefits across households because income or wealth are frequently negatively correlated with household size.

The problems of measuring the distribution of benefits of public goods, to some extent, also complicates the provision of public goods. The usual optimality condition for the efficient provision of a public good--that the sum of marginal benefits (i.e., the marginal social benefits) equals the marginal social cost--is difficult to establish when the distribution of benefits, and therefore the sum of these benefits, are not known, or not known for sure.

But for almost all types of public expenditures, not only for public goods, identifying the beneficiaries usually requires making a number of assumptions and having detailed empirical information. Effective and statutory expenditure incidence can differ significantly. For example, it can be argued that the statutory (or initial) beneficiaries of public education expenditures are teachers who receive government salaries, suppliers of textbooks and other teaching materials, builders of school facilities, etc. Ultimately, however, government-provided services benefit their users (e.g., students, patients, etc.), and their redistributive impact depends on the distribution of income of these users. Similarly, in the case of price subsidies for selected goods and services, estimating the distributional impact would require detailed information on household expenditure patterns, that would allow to quantify the weight of these goods in the typical consumption basket of each income bracket. For producer

^{1/} A similar pro-rich distribution results when interest income is used as a distributional proxy, as has been done in some studies.

subsidies, assessing their distributional effects depends crucially on the assumptions about their forward shifting (or lack thereof), i.e., whether these subsidies are likely to be reflected in lower prices for consumers of the subsidized goods, higher wages, or higher profits for the producer.

2. What are the benefits of public expenditure programs?

A frequent criticism of attempts to measure the distributional effects of public expenditures has been that they tend ignore the fact that the valuation of benefits by their beneficiaries may well differ from their valuation by policy makers.

Most studies equate benefits with expenditures; distributional effects of public expenditures are usually assessed on the basis of the impact of these expenditures on income (or consumption) of the beneficiaries. However, *changes in income or consumption do not necessarily lead to corresponding changes in welfare.* For example, if the government raises the degree of subsidization of a basic consumer good (say bread), the fact that, as a result, bread consumption increases does not imply that welfare has risen by the same amount. This, for instance, would be the case if people would divert part of the additional bread consumption to feed animals, i.e., as a substitute for animal feed. The misuse of the subsidy would unlikely be detected by studies that are either based on income or consumption as they do not convey information on final beneficiaries and the value these final beneficiaries attach to the benefit. A consumption-based approach, for instance, would look at bread purchases by households and equate this with household consumption, regardless of whether people or their domestic animals benefit. Therefore, policy recommendations on the basis of a consumption-based analysis may easily yield misleading results.

However, it may sometimes be possible to use welfare proxies for measuring the benefits and cost-effectiveness of public expenditure programs. Examples for such proxies are, for example, life expectancy or the infant mortality rate for assessing health services, or literacy and primary school enrollment for assessing education services.

Still, so far, attempts fully to incorporate welfare effects in studies of the distributional impact of public expenditures have remained largely confined to theory. This is because, as recognized by Holzmann (1990) in one of such studies, the data required for an empirical analysis of these effects are largely non-existent to date. Some recent empirical studies, such as Zanardi (1994), rely on small sample, game-type data that do not allow strong policy inferences. A more promising avenue in this respect would be to carry out broader-based household surveys, geared toward assessing the utility attached by different household groups to the provision of various public goods and services.

3. Assessing the costs of public expenditure programs

Assessing the true costs of expenditure programs, and therefore their cost-effectiveness, is complicated by the fact that the immediate direct budgetary cost may just reflect a fraction of the overall economic cost. In other words, the opportunity costs of many expenditure programs are often not easily measurable. For example, subsidy programs can have substantial opportunity costs, but not necessarily an immediate budgetary impact, particularly when they rely on non-cash means. For example, controlled consumer prices may or may not have an immediate budgetary impact, depending on whether producers are reimbursed by the government for the difference between the free market price and the controlled consumer price. In many cases the budgetary impact may be delayed. For example, utility companies may be forced to sell electricity at artificially low prices, but then, at some point in time, they may need "loans" from the government to cover their operating losses. In countries where the banking system is subject to considerable government interference, such loans to state enterprises are often given through banks. These directed lending operations to state enterprises usually have an adverse effect on bank profitability. It may be possible to roll over these loans, and thereby avoid giving explicit budgetary subsidies for some time. However, such policies are not sustainable, and usually leave behind a trail of bank restructuring and bad debt consolidation, and enterprise restructuring and reform.

Therefore, at any point in time, government budgets, typically, reflect but a fraction of the full cost of various expenditure programs. But even when the full cost is eventually and over time reflected in the budget, it is usually not easy to identify and attribute these costs as they may show up under various expenditure categories.

4. Defining the time horizon of the analysis

The large majority of studies on the distributional effects of public expenditure is still based on a single-period framework. These studies typically tend to ignore second-round, later-period distributional effects of public expenditures, which, in some cases, may even outweigh the first-round effects.

Later-period effects are important for all public expenditure programs. Food stamp programs, for example, do not only benefit the immediate recipients of food stamps, but also benefit agricultural producers. However, later-period effects are especially important for expenditure programs that are specifically designed to address life-cycle objectives, like social security, education, and housing, or for expenditure programs whose benefits are designed to accrue over time, like investment expenditure. For example, when studied in a single-period framework, social security would have large redistributive effects as contributions are levied on the working population, while benefits are paid to retirees or disabled individuals. As pointed out by Holzmann (1990), however, in a multiperiod framework an actuarially fair system would not have any redistributive

impact, since the present value of an individual's contributions would equal the present value of future benefits. In reality, of course, redistributive effects usually exist in such programs, due, for example, to immaturity of the system, unanticipated changes in demographic structures, or non-actuarial relations between contributions and benefits.

Clearly, programs that are designed to redistribute income across the life cycle are better understood when the analysis uses a long accounting period; but, as Menchik (1991) has pointed out, there are also instances where long accounting periods may actually yield misleading results. For example, liquidity-constrained individuals, like the poor, have a rather limited scope for intertemporal substitution of consumption decisions. Poor people are not usually able to borrow against future income streams to even out lifetime consumption paths, and they are not usually able to delay earning opportunities in order to acquire an education.

This would suggest that multi-period or life-cycle analyses may be more appropriate for economies with extensive life-cycle redistribution arrangements and relatively little poverty (rich countries), than for countries with embryonic life-cycle redistribution arrangements and a large share of the population at or below the poverty level (poor countries). It naturally follows that broad, cross-country comparisons should be approached with much care, particularly when they encompass rather different types of economies. Using traditional single-period analyses in a data set that contains both rich countries and poor countries would tend to overstate the actual extent of redistribution in rich countries relative to poor countries. Similarly, using life-cycle analyses could easily overstate the actual extent of redistribution in poor countries relative to rich countries.

But there are other issues to consider when defining the time horizon for the analysis. Single-period analysis is partial-equilibrium analysis; multi-period analysis typically has to make assumptions about the "normal" state of the economy to which the economy will return to in the long run. A common simplification in multi-period analyses is to assume that the economy is initially in a general equilibrium and that some external policy shock moves the economy, over time, to a new equilibrium. Two popular approaches that embody this assumption are computable general equilibrium (CGE) and social accounting matrix (SAM) models.

Both CGE and SAM models are useful tools for explaining the part of income inequality that arises from "macroeconomic" factors, 1/ and to analyze how key distributional parameters change over time as they react to

1/ See, for example, Bourguignon, Michel, and Miqueu (1983) who suggest that "macroeconomic" factors may account for a substantial share of income inequality: in developing countries, 50 percent of total inequality can be explained by the structure of earnings across sectors and occupational groups, the structure of employment, and the distribution of wealth.

exogenous shocks. They are less useful for policymakers faced with a decision on how to allocate given funds between competing ends, in situations where substantial structural rigidities and initial disequilibria would make the standard neo-classical assumptions inappropriate--which is a particular problem with CGE models--and for studying short-term effects where neoclassical assumptions are unlikely to hold in any case.

Another multi-period framework that has gained popularity for studying distributional issues, is generational accounting. 1/ Generational accounting focuses on distribution issues across generations, rather than on distribution issues between income groups. It indicates, in present value terms, what the typical member of each generation can expect to pay, now and in the future, in net taxes, i.e., taxes paid net of transfer payments received, and how current policy, or proposed policy changes will affect what future generations must pay, given the government's intertemporal budget constraint. Haveman (1994) provided a detailed critique of generational accounting noting, in particular, the sensitivity of its results to assumptions about the allocation of public expenditure benefits across generations and the lack of adequate empirical foundations for these assumptions. 2/

5. Addressing the role of market imperfections

Many studies of the distributional effects of public expenditure have ignored the role of market imperfections; nevertheless, reductions in market imperfections can lead to substantial welfare gains and have important distributional effects. Better credit, annuity, and capital markets, for example, would facilitate welfare-enhancing intertemporal shifts in lifetime income. This would, for instance, make it possible for young people to improve their lifetime income-earning potential by borrowing for education, or increase their welfare by allowing them to borrow to finance the purchase of a home.

Frequently, market imperfections have a most severe adverse impact on the poor, and many existing government programs (such as student loans or low-cost housing loans) are primarily designed to address such market imperfections. As shown by Holzmann (1990), particularly for the poor, the welfare gains from public programs that are designed to reduce or eliminate

1/ See, for example, Auerbach, Gokhale, and Kotlikoff (1994) for an introduction.

2/ Haveman (1994) also pointed out that generational accounting requires that government transfer payments and taxes be allocated to individuals of different ages and living in different periods. He found the magnitude of the implied task of specifying these profiles to be daunting, and the resulting accounts to be very sensitive to the assumptions made. Also, generational accounts reflect fiscal allocations rather than the theoretically preferred measure of fiscal incidence, and they ignore that beneficiaries may value public expenditures different from the government.

market imperfections can potentially generate welfare gains that are a multiple of those achieved through policies that aim directly at generating a more equal income distribution, such as direct income transfers. To use an extreme example: offering a student loan to everybody would result in higher welfare gains than using the same money to equalize everybody's income. Still, reductions in market imperfections do not relieve the government (and voters) from having to make a decision as to the desired degree of equality or inequality within the economy.

6. Data limitations

Quantitative assessments of the distributive effects of public expenditures involve substantial data requirements. Typically, these data are not fully (sometimes hardly at all) available, especially in developing countries. In recent years, various national statistical agencies and international organizations, also including the IMF, have begun to increase their efforts to improve or help countries to improve their data bases, carried out household income and expenditure surveys, and provided better and more regular information on social indicators. Also, substantial efforts are being made to improve the quality, timeliness, reliability, and degree of detail of data on public expenditures.

Still, a significant shortcoming of official statistics, especially income statistics, is the fact that they provide no information on informal sector activities. These activities differ significantly across countries and across income brackets. Particularly in developing countries, they frequently account for a large share of output and household incomes; often in the same countries, large segments of the poor may work mainly in the informal sector. Given the importance of the incomes received through the informal sector, measuring the distributional effects of public expenditures in these countries is subject to corresponding biases. For example, Rodríguez González (1993, 1995) in his studies of education expenditure in Peru suggested that large parts of the poorer population remain outside the public education system. To the extent that the same population groups are also not included in the income distribution data, education expenditures would appear to be more progressive (i.e., pro-poor) than they are in reality.

Biases are likely to be smaller in studies based on expenditure survey data, as, generally, expenditure data tend to capture a larger share of informal sector activities than income data. However, household expenditure data are not as readily available as household income data, which are at least partly based on data obtained from income tax returns.

V. The Political Economy of Public Expenditure Reform

In his 1974 paper on public expenditure policy in Latin America, Tanzi drew the following 3 conclusions:

"First, it appears that even the supposedly pro-poor social-type expenditure has little effect on income distribution. Second, the group that seems to be getting the greatest advantage from public spending is the urban middle class. Third, it is very unlikely that increasing public expenditure will bring about a better distribution of income unless such an expenditure is provided with a degree of selectivity which does not seem possible under present Latin American conditions."

Two decades later, it seems that little has changed. For example, Cardoso and Helwege (1991) in analyzing populism in Latin America, argued that "the history of populism makes conspicuous the paucity of genuine redistribution programs in Latin America," and, the same authors concluded elsewhere that "all of the evidence points to persistent, even growing inequality in the distribution of income" in the major Latin American economies (Cardoso and Helwege (1992)). Similarly, CEPAL's 1994 Social Panorama of Latin America (CEPAL (1994)) concluded that, although social expenditures continue to have a major positive effect on low-income groups, the composition of this spending, as well as the variations recorded during the 1980s did not generally contribute to improving its redistributive potential or degree of progressivity.

As mentioned above, there is broad agreement that public expenditure policies are a potentially effective redistributive tool. For example, Petrei (1995) has shown that transfers to households provided a significant supplement to the income of the lowest two income brackets in all four Latin American countries that he studied, even though, in absolute terms, the level of transfers to the upper income brackets exceeded those to the lower income brackets. Similarly, Urani (1995) has argued that a policy of massive transfers to the poor could greatly reduce poverty in Brazil, even though he concluded that the six concrete proposals he analyzed would still fail to eliminate poverty. Finally, Vélez (1995) has suggested that spending an additional peso on special rural programs could be expected to be 72 percent more effective in reducing income inequalities in Colombia than an additional peso that is spread equally across all existing social programs.

Analyses of the distributive impact of public expenditure programs frequently suggest that there is substantial scope for improving both equity and cost-efficiency; the papers presented at the VIIth CEPAL seminar point basically in this direction. 1/ The question then arises why, frequently, expenditure policies do such a bad job at meeting their proclaimed goals.

1/ See, for example, Cominetti and Di Gropello (1995a, 1995b), Medici and Agune (1995), Petrei (1995), Rodríguez González (1995), Urani (1995), or Vélez (1995).

Generally, and notwithstanding the above-mentioned analytical and technical problems of designing cost-effective and equitable public expenditure programs, it can be argued that unfavorable distributional outcomes rarely reflect problems of design per se; usually they are the result of political and institutional pressures and constraints that hamper redistributive efforts. Hausmann and Rigobón (1993) have suggested that a main reason why expenditure reforms are often difficult is because even rather inefficient expenditure programs can bestow substantial benefits to certain groups. In particular, they argue that it is difficult to reform expenditure programs which are regressive in absolute terms but progressive in relative terms, since these are relatively important to the poor, even though in absolute terms the nonpoor benefit most. 1/ In this case, both the poor and the nonpoor may support the status quo. The fact that proposed equity-enhancing and cost-effective reforms are often not implemented even after many years witnesses to the political power of the current beneficiaries of certain expenditure programs.

The regressive incidence of many existing expenditure programs often reflects a combination of the facts that "everywhere in the world the poor lack not only economic but also political power" (Harberger (1995)), and that expenditure policies usually take the form of "redistribution to the vocal" (Alesina (1995)). 2/ Aspe (1993) and Aspe and Sigmund (1984), for example, showed that in Mexico during 1940-80, most social expenditure programs improved the conditions of groups that had already been the main beneficiaries of economic growth, basically nonpoor urban groups. The Mexican experience is not unique in this respect. In many transition economies, for example, a main policy issue is the reform of broad-based, but cost-ineffective and relatively inequitable expenditure programs, such as generalized price subsidies for basic goods and services or generalized family allowances. Reform efforts, such as price liberalization accompanied by targeted income transfers to the poor or just improved targeting of existing programs, have often encountered strong resistance because they primarily affect the politically influential urban middle class. Hence, expenditure reforms are usually controversial because aggregate equity or efficiency improvements may still have adverse effects on the economic rents received by various groups of current beneficiaries.

1/ An expenditure program is considered progressive in absolute terms when the absolute amount of benefits received by people in lower income brackets exceeds that of people higher income brackets; it is considered progressive in relative terms if it is more progressive than the distribution of income. Hence, a program may well be progressive in relative terms (which is the weaker condition of the two), but regressive in absolute terms.

2/ Alesina (1995) notes that often the politically influential middle class succeeds in shaping the design of programs ostensibly targeted to the poor (e.g., education programs) in such a way as to appropriate most of the benefits from these programs.

To address the political economy problem of public expenditure reform, it is important to design policy measures in a way that they are supported, or at least not actively resisted, by the nonpoor. Obtaining the support of at least some of the nonpoor, is easier when (i) the burden on the nonpoor is kept small, and (ii) it can be demonstrated that a proposed policy can attain a broadly supported goal at the least possible cost (World Bank (1990)).

In this context, Birdsall and James (1993) have proposed that, to minimize opposition to expenditure reform efforts, the current cohort of beneficiaries of the programs that are to be reformed should be exempted from the reforms as much as possible. For example, "grandfathering" may be an effective policy option when introducing tuition fees for university students. Similarly, it is usually politically easier not to start than to cut off services or programs; new programs should be opposed unless they have high social returns will not be undertaken by the private sector, and do not have perverse distributional effects.

However, neither of these two proposals will be an effective policy option when the imperatives of budget adjustment require large expenditure cuts (relative to the expenditure level that would have prevailed if current policies would be continued), as, for example, in the case of generalized price subsidies for basic consumer goods.

Alesina (1995) has suggested that one way to avoid being paralyzed by distributive battles is to limit, by law, the possibility for various interest groups to use the budget process as a battleground for special interests. In general, this can be achieved by restricting the discretion of policymakers, for example by limiting number and types of possible budget amendments during the legislative process or by limiting the decision power of the spending ministries. Also, transparent procedures limit the natural propensity of policymakers for devising creative off-budget operations. By and large, it would seem that the same budgeting procedures that have been proven useful to enforce fiscal discipline should also be useful for enhancing cost-effectiveness.

VI. Conclusions

Traditional economic analysis holds that the process of growth and economic development is necessarily accompanied by certain changes in the income distribution. Distributional aspects of economic policies were frequently analyzed through their impact on the rate of growth. There exists a broad consensus these days, that economic growth alone is not sufficient to shape the income distribution, particularly to improve it or to ensure a significant decline in poverty, even though it is commonly agreed that it can play an important supportive role. In addition, it is generally accepted that a high degree of inequality can have detrimental effects on a country's future economic growth potential and performance.

It is increasingly recognized that, to improve the distribution of income or reduce poverty, qualitative aspects of economic growth are probably more important than economic growth per se. In this context, the distributional effects of public expenditure policies, and the composition of public expenditures have been the focus of considerable analytical attention. In contrast to traditional economic analysis, this research has shown conclusively that there is not necessarily, and not even usually, a trade-off between redistributive and efficiency goals in public expenditure policies. Therefore, expenditure policies can help to mitigate or avert a typical Kuznets process, so that, in the process of economic development, the income distribution does not need to get worse before it can get better, and they can do so without necessarily having an adverse impact on future economic growth.

However, devising the right expenditure policies, i.e., policies that are cost-effective, efficient and equitable, is complicated by a number of analytical and technical problems. Among the most common ones are: identifying the beneficiaries of public expenditure programs; evaluating the benefits provided by public expenditure programs; deciding the time horizon for assessing redistributive effects; assessing the role of market imperfections in the distribution of benefits from public expenditures; and addressing data limitations, and, in particular, how adequately to account for the informal sector.

These problems notwithstanding, it can be argued that unfavorable distributional outcomes rarely reflect problems of policy design per se; usually they are the result of political and institutional pressures and constraints that hamper redistributive efforts. To address the political economy problem of public expenditure reform, it is important to design policy measures in a way that they can be supported by a relatively broad constituency, and to limit the scope for various interest groups to use the budget process as a battleground for special interests.

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