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Taxation and Unemployment

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Abstract

This paper reviews conceptual linkages between taxation and unemployment, available empirical evidence and country policies that may have a bearing on these linkages in the OECD and in a sample of developing and transitional economies, Fund policy advice on these issues, and tax policy options in addressing the unemployment problem. It concludes that the emphasis in policy should be placed on minimizing tax distortions, rather than on formulating activist tax policies to reduce unemployment.

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Summary

The links between taxation and unemployment are potentially important. This paper reviews empirical evidence as well as policies that may have a bearing on this linkage in the OECD and in a sample of developing and transition economies. It then summarizes Fund policy advice on these issues as provided to countries in the context of recent consultations and program missions. Finally, with a view to strengthening prospective Fund advice in surveillance and program design, it identifies tax policy options--together with an assessment of their merits and limitations--in addressing the unemployment problem.

The paper concludes that taxation, although it is only one of many factors (sometimes not even a dominant factor) that can directly affect unemployment, is an important determinant of market distortions in general and of labor market distortions in particular. Hence, the emphasis in policy should be placed on identifying those elements of a tax system that are most conducive to minimizing distortions and fostering a favorable environment for economic growth and, therefore, employment. Appropriate policy measures could include a spreading of the burden of employer payroll contributions to other tax bases. Less priority should be attached to formulating activist tax policies to reduce unemployment.

I. Introduction

Concerns about unemployment, and appropriate measures to address it, have come to the fore in recent policy discussions in many industrialized, developing, and transition economies. Several factors have contributed to this development. For industrialized countries, the startling contrast between the unemployment picture toward the end of the 1980s in the United States relative to Western Europe (particularly the European Union (EU) countries) has become a challenging puzzle: in the former, the unemployment rate returned to the early-1970s levels (around 5.5 percent) by the end of the disinflationary period that commenced in the early 1980s. In contrast, in the EU countries it remained at high levels (over 8 percent), relative to the lower levels experienced (less than 4 percent) in the early 1970s, following a similar period of disinflation. While country-specific factors are obviously important, the sharp contrast in the overall unemployment experience clearly suggests that underlying factors impinging on the labor markets in the United States and in the EU countries may be different. 1/

For developing economies, while the pursuit of policies to foster economic growth on a sustainable basis has always been high on the agenda of country authorities, also important has been the need to expand gainful employment opportunities. 2/ For most transition economies, fundamental economic transformations--especially in connection with the privatization and restructuring of state-owned enterprises (SOEs)--have inevitably brought the unemployment problem into open prominence, and its alleviation has become a focal point of policy efforts to sustain the reform process in political and economic, as well as in social, terms. 3/

Given a country's institutional and regulatory environment, observed unemployment at any given time is primarily determined by two economic factors: the overall level of economic activities (the cyclical or macroeconomic component) and the interplay between the demand for and supply of labor, which are influenced by policies directly or indirectly affecting the functioning of the labor market (the structural or microeconomic compo-

1/ See Bean (1994). The stark contrast between the United States and the EU countries in unemployment developments, following their recent recessions, continued into the 1990s. After reaching a peak of about 7.5 percent in 1992, the unemployment rate in the United States fell to about 6 percent in 1994, as the recovery there, which began in early 1991, became established. In the EU countries, however, the unemployment rate rose steadily after 1990 and reached 11.5 percent in 1994, as the troughs in economic activity in many of these countries came about only more recently--in early to mid-1993 (a notable exception is the United Kingdom, where the recovery commenced about a year earlier and the unemployment rate dropped noticeably to slightly over 9 percent in 1994). See OECD (1995a) for more details.

2/ See United Nations (1994) and World Bank (1995).

3/ See Commander and Coricelli (1995).

ment). ^{1/} While tax policy, as one among many policy instruments available to policymakers, has a macroeconomic dimension, this paper focuses on the various ways in which it can impinge on unemployment at the structural level. In part, this focus is chosen because the macroeconomic impact of taxation on unemployment is at least qualitatively the same as that of other instruments of fiscal policy (e.g., government spending); it therefore does not seem to call for additional elaboration. However, and more important, structural factors, including tax policy, may have played a significant role in explaining recent unemployment developments in many countries. ^{2/}

The organization of the paper is as follows. Chapter II discusses the conceptual link between taxation and unemployment. Fundamental to this discussion is the concept of "equilibrium unemployment." A number of analytical frameworks have been developed which allow for the analysis of the direct effects on the equilibrium unemployment rate of taxes (and subsidies) on labor (e.g., payroll taxes and unemployment benefits), the indirect impact on unemployment of taxes (and subsidies) on other factors (e.g., investment incentives) that alter the relative price of labor, and the implications of a switching of tax burdens (at least partially) from labor to nonlabor incomes (e.g., from payroll to consumption taxes). Chapter II also identifies other factors that bear on the link between unemployment and taxation which are especially relevant for developing and transition economies.

Chapter III reviews the available empirical evidence and surveys country policies regarding taxation and unemployment in OECD countries and in selected samples of developing and transition economies. For OECD countries, recent policy discussions have focused on the impact on unemployment of payroll taxes, high marginal effective income tax rates, and unemployment benefits. The findings of most empirical studies of the impact of taxes on unemployment have, however, been rather mixed. In developing and transition economies, few quantitative studies are available on the relationship between taxation and unemployment, given serious data limitations. Nevertheless, important aspects of tax policy having a bearing on labor market developments in developing economies have been those influencing the profitability of agricultural activities, as well as investment incentives provided in corporate income tax and investment laws.

^{1/} It is common to note that unemployment also comprises frictional and seasonal components, but these usually play a fairly minor role in the overall unemployment picture and, in any case, are seldom the source of economic policy concerns.

^{2/} The distinction between structural and cyclical unemployment is not meaningful if all economic fluctuations are interpreted as agents' intertemporally optimal responses to real or policy shocks--an interpretation adopted by the real business cycle literature. Braun (1994) has found that incorporating fluctuations in average marginal tax rates into a real business cycle model could enhance the empirical properties of the model, particularly with respect to the labor market (because of the labor supply effects of taxation).

In transition economies, unemployment developments have so far been affected more by various aspects of the reform process than by the structural aspects of the tax system (although tax policy has obviously had an impact on unemployment through its role in supporting macroeconomic stability).

Chapter IV reviews recent Fund policy advice on a broad range of taxation and unemployment issues. Common themes that emerge are the need to improve the neutrality of tax systems, lower the tax burden on labor, and increase the flexibility of labor markets. Policy options, with respect to both general tax policy issues and labor market-specific tax measures, on which prospective Fund advice could be focused, are then discussed. The paper concludes in Chapter V with some final observations.

II. Conceptual Issues

This chapter discusses a number of potentially important conceptual linkages between taxation and unemployment, and identifies some special tax policy issues particularly relevant for developing and transition economies.

1. Analytical background

Since the Keynesian revolution, the literature on theories of unemployment has not only grown voluminously, but has also experienced several shifts in the paradigm used by economists in approaching and diagnosing the phenomenon. 1/ Particularly important has been the emergence of the concept of the "natural rate of unemployment" (NRU), which represents the unemployment rate that would result when actual and expected rates of inflation are equal to each other. 2/ It is, therefore, an unemployment rate that could be sustained by a (any) stable rate of inflation. 3/ The NRU concept is an equilibrium concept; it corresponds to the rate of unemployment at which agents' expectations are consistent with actual outcomes. 4/ The policy significance of the NRU concept lies in its clear implication that, if the unemployment problem is to be addressed in a meaningful way, analyses should be focused on the structural determinants--the micro-foundations--of the NRU itself, and on how these determinants can be affected by government policies (such as tax policy). This contrasts with the focus of traditional Keynesian models, which view unemployment as a

1/ For a survey of the policy implications of different unemployment theories, see Snower (1995).

2/ The development of the NRU concept is commonly attributed to Friedman (1968) and Phelps et al. (1970).

3/ For this reason, the NRU is more accurately described as the NAIRU (nonaccelerating inflation rate of unemployment)--a term first coined by Tobin (1972).

4/ Equilibrium defined in this way is different from that defined on the basis of market clearance. Since by definition the labor market is not cleared when there is unemployment, job rationing exists even when the market is in equilibrium in this sense.

disequilibrium phenomenon and where policy implications of the analysis frequently rest on policy surprises or exogenously rigid and misaligned wage and price expectations. 1/

Within the framework of the NRU concept, familiar demand and supply analyses of how policies can affect the equilibrium outcome of the labor market are readily applicable, and observed sustained upward drifts in the unemployment rate over long periods of time can be reconciled with the notion of upward structural shifts in the equilibrium rate. 2/ Of course, viewing the problem in this light immediately raises questions both as to why equilibrium in the labor market does not occur at the point where the market clears and about the underlying causes of structural shifts. But these are precisely the kind of questions that proper economic analyses of unemployment are designed to address. Indeed, such issues have been the focus of the recent literature.

This literature has broadly analyzed unemployment issues according to three broadly complementary types of models, 3/ viz., (a) efficiency-wage models; 4/ (b) insider-outsider models; 5/ and (c) models of job

1/ This is sometimes referred to as the disequilibrium or fixed-price approach. See, in particular, Barro and Grossman (1976).

2/ Naturally, disequilibrium adjustments are not necessarily ruled out in an equilibrium framework.

3/ A comprehensive survey of analytical models of unemployment has recently been provided by Nickell (1990).

4/ Efficiency wage models show that firms may willingly set real wages, though flexible, above the level that would clear the labor market, for two possible reasons. First, due to imperfect information, the average quality of job applicants faced by the firms could be positively correlated with their wage offers (the so-called adverse selection effect). Hence, it pays to offer higher wages than would otherwise be necessary under perfect information for recruiting high-productivity workers. Second, lowering wages could adversely impact on the firms' profitability in the form of either increased quits (thus leading to higher labor turnover costs) or reduced work effort on the part of those who remain on the job, or both. See Weiss (1990) for a survey of efficiency-wage models.

5/ Insider-outsider models focus on the asymmetric bargaining positions of workers who are already employed (insiders) and those who are seeking jobs (outsiders). Insiders are able to push real wages above the market-clearing level because their jobs are protected to a certain degree by a variety of labor turnover costs. For details of this theory, see Lindbeck and Snower (1988).

search. 1/ Adverse developments in the various determinants of equilibrium unemployment, for example, a rise in the tax burden on employers, an increase in unemployment benefits which raises the propensity to quit or prolongs the duration of unemployment, etc., would then lead to an upward structural shift in the equilibrium rate. On the basis of the unemployment experience of many European countries in the 1980s, a recent strand of the literature also argues that upward structural shifts in the equilibrium unemployment rate have been caused by hysteresis (i.e., structural factors being adversely affected by negative cyclical developments). 2/

2. Tax policy effects on unemployment

The various analytical approaches allow for an evaluation of the effects on unemployment of alternative tax policies. 3/ Adopting a framework based on the concept of market equilibrium rooted in micro-foundations renders the conceptual linkages between taxation and unemployment very straightforward. Since an equilibrium outcome in such a framework is determined by the optimizing behavior of economic agents responding to cost-benefit incentives, all taxes and subsidies that affect such incentives--which they almost invariably (directly or indirectly) do--will have an impact on the equilibrium outcome. Hence, all other things equal, policies that result in increasing labor costs to employers tend to reduce labor demand and employment, those that lower the costs to workers of being unemployed encourage higher quit rates or longer job search durations, those that reduce employers' labor turnover costs may lower labor costs and possibly increase employment, and those that lower the prices of nonlabor factors of production relative to labor would most likely alter relative factor intensities against labor.

1/ Job search models treat unemployment by and large as a voluntary phenomenon, in the sense that a job seeker may rationally turn down a current offer of employment (at a wage below his so-called reservation wage) and, therefore, choose to remain unemployed for a certain period of time, with the expectation (formed on the basis of all available information) of receiving a better offer. Search equilibrium--where flows into and out of unemployment are the same--depends, among other things, on the rate of job vacancy (the number of available jobs relative to the labor force), which in turn is dependent on conditions in the product market. The inverse relationship between the vacancy rate and the unemployment rate is known as the Beveridge curve. For a survey of the search literature, see Mortensen (1986) and Pissarides (1990). Modelling unemployment as an outcome of voluntary search behavior has some conceptual advantages, since it can facilitate a systematic analysis of the impact on search behavior of various policy variables of interest, such as the extent of availability of unemployment benefits relative to wages (i.e., the replacement ratio).

2/ See Elmeskov and MacFarlan (1993) for a review of various explanations of unemployment persistence.

3/ The analysis clearly applies to subsidy policy as well, since subsidies are, analytically, negative taxes. Employment effects of taxation discussed below are, therefore, qualitatively reversed under subsidies.

The discussion below is organized along the increasing scope of the tax instruments considered, from those directly aimed at the labor market (e.g., payroll taxes) to those whose applicability extends to other markets (e.g., taxes on capital) and to the economy as a whole (e.g., taxes on income and consumption). Some special implications for open economies are also noted.

a. Taxes on labor

The pre-eminent example of a direct labor tax is, of course, the general payroll tax (usually assessed jointly on employers and employees), the revenue from which is used, in most countries, to finance a variety of social insurance programs. Like any other tax, a general payroll tax opens up a tax wedge between the supply price net of tax and the demand price gross of tax of the taxed commodity, in this case between real wages net of tax received by the employees and real wages gross of tax paid by the employers. Hence, in analyzing its employment effects, the crucial question concerns its incidence, rather than on the division of its total nominal tax rate between the two sides of the labor market.

The incidence of the general payroll tax depends, as is always the case with analyses of this sort, on the relative elasticities of relevant demand and supply relationships, as well as on other factors which may impede wage flexibility (e.g., minimum wage requirements). 1/ If wages net of tax in the post-tax equilibrium remain the same as in the pretax equilibrium, then the effective burden of the tax would fall entirely on the employers, and equilibrium unemployment would, all other things equal, increase as a result. It is an empirical question whether the general payroll tax would generate this outcome, or some other outcome in situations where its effective burden is partly or wholly shifted to the workers. 2/

The employment effects of a general payroll tax are more complex than the above discussion indicates. This is because many social security

1/ Since unemployment exists when the labor market is in equilibrium, the equilibrium outcome clearly does not correspond to the point where a conventional labor demand curve intersects with a conventional labor supply curve. Instead, it can be depicted by the intersection of a "demand-wage" curve of producers with a "supply-wage" curve of workers, where these curves embody all relevant variables such as labor turnover costs, wage-bargaining power, and expectations at both sides of the market. A downward-sloping demand-wage curve and an upward-sloping supply-wage curve in the wage-employment space can be derived from a variety of analytical models. Phelps (1994b) provides an extensive discussion on the properties of these curves.

2/ Various aspects of the impact of taxation on labor demand and supply are discussed in OECD (1995c).

programs 1/ financed by it have an impact on the labor market equilibrium in and of themselves. 2/ For example, higher unemployment benefits lower the cost of being unemployed and, therefore, could reduce the efforts of job seekers to find employment (job-search models) as well as raise the labor participation rate (labor supply effects). They could also increase wages offered by employers to discourage quits (efficiency-wage models) 3/ and strengthen the bargaining position of workers already employed (insider-outsider models). These considerations indicate that unemployment may well be exacerbated by unemployment benefits. The overall outcome thus depends on the combined effects of the incidence of the tax and the nature of the programs it finances. 4/

Besides a general payroll tax, there are many specific labor taxes (or subsidies) which are directed toward particular sectors of the economy or to particular categories of labor (by demographic group or by level of earnings) to achieve a variety of labor policy objectives. Employment tax credits provided to employers designed to stimulate employment in targeted areas or labor groups are one common example. 5/ Other seemingly nontax-related labor policies, such as the minimum wage, could also be viewed as a tax on labor: imposing a minimum wage is conceptually equivalent to imposing a tax on the employer for hiring workers who would otherwise be paid less than the minimum wage, and transferring the revenue to the hired workers; similarly, increasing the ceiling on earnings for payroll contributions to some social security programs is the same as introducing a

1/ In this paper, the term "social security" programs or systems is used to cover both traditional benefits, such as those related to old-age pensions and unemployment, and other benefits primarily designed to mitigate short-term adverse effects of economic reforms in transition economies--commonly referred to in Fund documents as "social safety nets."

2/ It should be noted that the closer the perceived linkage between a tax and the benefits it finances, the less is the tax element it effectively embodies.

3/ The propensity to quit on the part of the workers also depends importantly on the existing unemployment rate, since this may affect the probability (which is determined by the number of job seekers relative to vacancies) of success of their subsequent job search.

4/ In actuality, the employment effects of various social security programs could be further complicated by a variety of design considerations. An unemployment insurance program would have different employment implications, for example, depending on whether or not it experience-rates individual employers, i.e., the cost of the program to an employer varies positively with the amount of benefits collected by its workers. Since experience rating is usually partial even when used (e.g., in the United States), it effectively subsidizes firms with high labor turnover at the expense of those with low labor turnover.

5/ Phelps (1994a) contains a discussion of alternative designs of tax credits to assist low-wage workers.

tax on employing those workers whose earnings have now fallen below the new ceiling. 1/

For all such policies, employment effects could be analyzed within the standard framework of market equilibrium. In addition to the effects of demand and supply elasticities, labor taxes also bring to the fore the importance of the degree of labor mobility as well as the substitutability among different labor categories in the production process. The often-cited adverse employment impact of minimum wages being limited to teenage workers in low-skill jobs could be explained, for example, by the low degree of substitutability between them and skilled workers. 2/

b. Taxes on capital

Taxes on nonlabor factors of production, most notably capital, can indirectly impinge on the labor market as well. In the short run, a decrease in the taxes on the rental price of capital, ceteris paribus, tends to raise the relative price of labor and increase the capital-labor ratio at any given level of output, hence producing an adverse impact on employment, the extent of which would depend, among other things, on the crucial elasticity of substitution between capital and labor. 3/ In the long run, however, such a tax cut is likely to stimulate investment and produce a favorable impact on economic growth and employment prospects. Thus, there may be a trade-off between short-run costs and long-run gains. 4/

The above discussion implicitly assumes that labor is homogeneous. The employment effects of taxes on capital are somewhat more complicated if labor is differentiated by skill level. While unskilled labor could be regarded as a substitute for capital, skilled labor is more likely to be complementary to capital in the production process. Hence, taxes that lower the relative price of capital could actually raise the demand for skilled labor and its wages relative to unskilled labor. Since this has the effect

1/ See Hamermesh (1993) for a comprehensive treatment. Another example of a nontax labor policy that has a tax-like effect is the mandatory severance pay, which is conceptually akin to a contingent tax on labor and tends to impede the speed of adjustment in employment as conditions in the product market change.

2/ In a recent study, Card and Krueger (1995) found no compelling evidence, however, that increases in the minimum wage had any systematic effect on employment in the United States. The authors suggested that their findings could be explained by the presence of monopsony power of firms operating with ongoing vacancies. Small increases in the minimum wage could well have enabled some firms to fill their vacancies more quickly.

3/ These effects abstract from general equilibrium repercussions from the capital market.

4/ Rowthorn (1995) argues that low investment has been a significant factor behind the rise in unemployment in Western Europe. Various aspects of the impact of capital formation on employment and unemployment are discussed in OECD (1995b).

of increasing the relative returns to acquiring skills, taxes on capital have long-run implications for the accumulation of human capital.

Tax measures designed to lower the relative price of capital are usually referred to as investment incentives which, in one form or another, exist in practically all countries. Common forms of such incentives include tax holidays or preferential income tax rates, investment tax credits, partial or full write-off of capital acquisition, and accelerated depreciation; and they could be applied on a targeted (e.g., by economic sector or geographical region), conditional (e.g., on the size of investment or the number of employees), or general basis. Not all incentives are, however, equally meritorious in terms of either economy efficiency or effectiveness in achieving their intended objectives, and, depending on their design, could have different employment effects.

c. General broad-based taxes

General broad-based taxes, such as those on consumption and income, may also affect employment. Since not all consumption is financed from labor income, a revenue-neutral shift from labor taxes to a consumption tax necessarily reduces the overall tax burden on labor and, therefore, could have a favorable impact on employment. 1/ Switching to an income tax could produce a somewhat different outcome, as it would increase the tax burden on income from capital and, therefore, discourage savings and capital accumulation, economic growth, and employment prospects in the long run. 2/ In either case, however, the switch would involve base-broadening and allow some lowering of tax rates to generate a given amount of revenue.

As labor income is usually a major component of the income tax base, the combination of the sum of income and employee payroll taxes and unemployment benefits (inclusive of all benefits whose amounts are withdrawn or

1/ Whether this result is temporary or permanent would depend on the nature of the underlying analytical framework. For example, in the model employed by Layard et al. (1991) that combines elements of both efficiency-wage and insider-outsider models, taxes are borne by labor in the long run. Hence, any unemployment-reducing effect of the tax switch would be temporary (although it could persist over long periods of time, depending on the speed of disequilibrium adjustment). In contrast, in the structural model studied by Phelps (1994b) that emphasizes the role asset markets play in the determination of equilibrium unemployment, the effect of a tax switch would be permanent.

2/ Two well-known studies finding a potentially large response of savings to interest rate changes are Boskin (1978) and Summers (1981). The effects of taxation on savings are comprehensively treated in OECD (1994e). The negative impact of income taxation on growth is a particularly prominent implication of endogenous growth models. See Barro and Sala-i-Martin (1992) for a survey of this literature. The employment effects of switching the effective burden of labor taxes to other forms of taxation, including energy taxes, are discussed in OECD (1994c) and European Commission (1994).

reduced once the recipients find work) could raise the marginal effective tax rate on earnings to such high levels--to rates exceeding 100 percent in some instances--that the incentive to work could be significantly reduced, if not completely eliminated. This extreme form of the so-called poverty trap underscores the necessity, when analyzing the impact of taxation on unemployment, of taking the tax and benefits systems jointly into account in a comprehensive manner. 1/ In general, the interactions between the two systems could result in highly nonlinear budget constraints and, therefore, elicit complex labor supply responses. Still, micro-simulation models can be used to study the effects of alternative combinations of tax and unemployment-related benefits. 2/

d. Open-economy considerations

Labor and income taxes whose effective burdens are not fully shifted onto workers would clearly raise product prices and have adverse trade consequences for a country: with fixed exchange rates, its exports would be discouraged; with flexible exchange rates, the resulting currency depreciation would increase the cost of its imports. In either case the country would suffer a real loss of income stemming from the rise in prices for its domestic or foreign goods, or both. This impact would not be uniform, however, across all sectors or labor groups. The rise in labor costs would render the labor-intensive industries relatively worse off than capital-intensive industries in international markets, and the composition of exports would shift in favor of the latter. As a consequence, skilled labor, being a likely complement to capital as noted earlier, would benefit relative to unskilled labor. The relative demand for skilled labor would also increase if the labor taxes are imposed on earnings subject to ceilings, since in this case the labor costs of unskilled workers would rise relative to skilled workers. 3/

In the open-economy context, labor and income taxes, whose effective burden is at least partially borne by workers, would also have implications for labor migration across national boundaries. Again, not all labor groups would be affected equally. Skilled labor are likely to be much more mobile --as it enjoys better employment opportunities abroad--than unskilled labor. Hence, the higher the effective tax burden on labor earnings, the more likely is the development of the "brain drain" problem. 4/

1/ The poverty trap poses a difficult dilemma for policymakers. On the one hand, high benefit withdrawal rates would increase the marginal effective tax rate on labor earnings and, consequently, the disincentive to work; on the other hand, lowering the withdrawal rates would increase the number of recipients eligible for such benefits. See OECD (1994c) for an extended discussion on this issue.

2/ See OECD (1995c) for a discussion of these issues and a review of available results.

3/ See Ehrenberg (1994) for a survey of these issues.

4/ See Tanzi (1995) for a discussion of these issues.

Import and export duties could also play an important role in affecting unemployment, particularly in developing economies. In these economies, imported capital goods often receive preferential tariff treatment, thus raising the relative price of labor; and export duties on agricultural products, by affecting agricultural profitability, could influence rural to urban migration of labor and have an impact on urban unemployment.

3. Special tax issues in developing and transition economies

While much of the preceding discussion has general applicability in all economies, certain unique characteristics of developing and transition economies raise additional noteworthy issues of taxation and unemployment in these economies. This section identifies and discusses such issues.

Developing economies. As a group, developing economies tend to rely far less on revenue from payroll taxes than do developed countries. ^{1/} This suggests that taxes on labor are a much less important determinant of labor market conditions in the former than in the latter. Instead, significant tax policy implications for unemployment in developing economies could arise from the dualistic nature (e.g., urban vs. rural) of, and the importance of the agricultural sector in, many of these economies.

Measured unemployment in many developing economies reflects unemployment in the formal urban sector. While the scope of explicit unemployment benefits is limited, an unemployed urban worker could be supported by either engaging in activities in the informal sector, or receiving transfers from other members of his extended family--located most likely in the rural sector. The size of such transfers--which would affect his behavior toward job search and choice of available options--could be affected in an important way by the government's tax and pricing policies relating to agricultural output. Policies which improve the profitability of agricultural activities, such as raising procurement prices and lowering export taxes on agricultural products, ^{2/} tend to increase rural to urban transfers and possibly reduce the urgency for the unemployed urban workers to search for employment.

The above effect on urban unemployment is countered, however, by the impact of such policies on rural to urban migration of labor--an often-cited

^{1/} Zee (1996) noted that, in a comparison between OECD countries and a broad sample of 56 developing economies, the (unweighted) average revenue from payroll taxes during the 1975-89 period amounted to about 25 percent of total tax revenue for the former and about 7 percent for the latter (ranging from negligible amounts in Asia to about 15 percent in the Western Hemisphere). In the same period, total tax revenue as a percent of GDP in OECD countries averaged more than twice that in the same sample of developing economies.

^{2/} A review of major explicit and implicit instruments of agricultural taxation in a number of developing economies can be found in United Nations (1993).

important contributing factor of urban unemployment. A rise in agricultural profitability would either improve employment opportunities in the rural sector or close the wage gap between the urban and the rural sectors, or both. For either or both of these reasons, the incentive to migrate is reduced. Hence, for analyzing unemployment issues in developing economies, taxation of the agricultural sector could be of paramount importance. 1/

Transition economies. The concept of equilibrium unemployment is much less applicable, at the present stage, to transition than to other economies. The sheer scope of the economic transformation that has taken place since a few years ago in many of these economies suggests that significant adjustments in the allocation of resources, including labor, could be an on-going process for quite some time to come. During this adjustment process, tax policy might well have to achieve objectives and face constraints that are different from those under more normal circumstances, thus entailing possibly different implications for the labor market. 2/

Since an environment of macroeconomic stability is an essential ingredient for fundamental economic reforms to bear fruit, it is not uncommon to find that the top tax policy priority in transition economies is the mobilization of sufficient revenue to contain or reduce fiscal imbalances. A major source of revenue pressure in these economies derives in fact from employment-related expenditure needs--the provision (even if only for a limited duration) of unemployment benefits and retraining to surplus labor being shed on a large scale by the SOEs--that are often required to ensure the sustainability of the reform process. 3/ Yet many of these economies frequently lack both sufficient tax handles outside the SOE sector as well as an adequate administrative machinery to effectively implement a typically broad-based, market-oriented tax system. Hence, revenue measures might have to rely on a few readily available tax handles, such as payroll taxes. 4/ In this case, there is a clear trade-off between short-run revenue needs and the long-run undesirability of heavy taxation of labor earnings. 5/

1/ A comprehensive treatment of tax and pricing policies and their implications for employment in the context of a dualistic urban-rural economy can be found in Sah and Stiglitz (1992).

2/ A number of issues related to the labor market in transition economies are addressed in Barr (1994).

3/ Policy issues and options concerning expenditures relating to the proper design of social safety nets are discussed in IMF (1995b).

4/ Given the weak tax coverage of emerging market sectors in transition economies, the burden of personal income taxes also tend to fall primarily on wage income.

5/ It should also be noted that introducing tax measures solely to meet short-run revenue objectives has an inherent danger that they may prove difficult to rectify (if needed) subsequently.

Another common tax instrument found in transition economies--but rarely in market-oriented economies--is the excess wage tax. ^{1/} Rather than to raise revenue, its objective is to discourage excessive wage distributions to workers stemming either from soft budget constraints or from the absence of the kind of financial discipline typically enforced by private ownership and the market mechanism, or both. To the extent that it succeeds in dampening wage inflation, it contributes to macroeconomic stability and could, therefore, be considered as meritorious. It is, however, a type of tax on labor earnings that could compress the wage scale and reduce workers' incentive to acquire job skills and improve their productivity. Hence, the policy question is again one of a trade-off between short-run gains and long-run costs.

III. Review of Empirical Evidence and Country Policies

This chapter reviews available empirical evidence on the linkages between taxation and unemployment, as well as country policies that may have a bearing on these linkages. It begins in Section 1 with a simple characterization of the basic statistics on unemployment rates, the levels and structures of tax revenue, and statutory payroll tax rates in three groups of countries: OECD, a selected sample of developing economies, and a selected sample of transition economies. ^{2/} Even where the data are relatively good, viz., in the OECD countries, there appears to be very little obvious correlation between overall levels of taxation and unemployment. In Section 2, the impact of taxation on unemployment in these groups of countries is discussed in the light of both available empirical evidence and country policies. In the OECD countries, empirical studies offer some support for the proposition that, at the margin, high marginal tax rates on labor (broadly defined to encompass the loss of benefits associated with unemployment) may contribute to high unemployment. In developing economies, the literature is thin, and one can only note the existence of a tax policy environment often biased toward the utilization of capital relative to labor, and in some cases against the agricultural sector. In transition economies, any linkage between taxation and unemployment appears to be overwhelmed by the broader structural and macroeconomic factors affecting the labor market.

^{1/} An excess wage tax could take the form of an explicit tax on, or the nondeductibility (in computing taxable enterprise profits) of, wages paid in excess of some established norm.

^{2/} The selected samples of developing and transition economies have been chosen to reflect geographical diversity and, for the former sample, income diversity as well.

1. Basic statistics on taxation and unemployment

Table 1 provides a comparative picture of average unemployment rates in the three groups of countries. The quality of the statistics varies substantially. 1/ Whereas the data on unemployment in the OECD countries are reasonably comprehensive, those in developing economies tend to be limited to the formal sector. For the latter, the incomplete nature of the data pertaining to the informal and agricultural sectors, where a significant proportion of the population are employed, allows for little characterization of the degree of under- or part-time employment. In transition economies, unemployment data have begun to be collected only recently in a serious manner. Table 1 also provides comparative data on the levels and structures of tax revenue in 1990-93 in the above country groups. More disaggregated information on statutory social security and payroll tax rates for these countries in 1993 are given in Table 2. 2/

a. OECD countries

Nature of unemployment. All OECD countries, with the exception of Japan, experienced strongly rising levels of unemployment following the two oil price hikes in the 1970s. 3/ The level of unemployment appears to have risen between the successive peaks of economic activity in many OECD countries, suggesting that at least part of the increase in unemployment is of a structural nature. There has also been a clear rising trend for unemployment of the least educated members of the labor force, relative to the more highly educated. This has given rise to the view that the increase in structural unemployment can be frequently explained by the increasing skills mismatch between labor demand and supply, following technological changes and the growing international division of labor. Differences have emerged in the unemployment patterns of the United States and the EU countries (with unemployment rates in the latter being higher after the mid-1980s); in the United States, the level of unemployment has returned close to its pre-recession level--a phenomenon commonly attributed to the relatively high degree of wage flexibility for the less skilled in the U.S. labor market.

1/ Cross-country comparisons of unemployment rates require caution, as definitions, coverage, and quality of data may differ across the countries, particularly with respect to developing and transition economies.

2/ The statistical information shown in Tables 1 and 2 is intended primarily to provide a broad indicative comparison among the three country groups. The discussion in the text below on both the developing and transition economies sometimes draws on available data pertaining to sample countries and time periods that do not necessarily coincide with those given in the tables.

3/ In the United States, the sharp rise in the unemployment rate (from 5.6 percent in 1974 to 8.5 percent in 1975) immediately after the first oil price hike was followed by a period during which the unemployment rate steadily declined until the second hike, when it again turned sharply upward (reaching a peak of 9.7 percent in 1982 from 5.8 percent in 1979).

Table 1. Unemployment and the Level and Structure of Tax Revenue, 1990–1993 ^{1/}

	Unemployment rate	General government tax revenue ^{2/}			
		Total	Income, profits and capital gains	Social security and payroll	Consumption and international trade
	(Percent)	(In percent of GDP)			
OECD countries ^{3/}	7.4	37.8	14.2	9.8	11.4
Australia ^{4/}	9.5	29.3	16.5	1.8	8.2
Austria	3.6	42.5	11.2	16.7	13.0
Belgium ^{4/}	8.0	45.3	16.5	16.0	11.5
Canada ^{4/}	10.2	36.5	16.9	5.8	9.5
Denmark	10.9	49.2	29.1	1.9	16.2
Finland ^{4/}	10.4	46.5	19.3	11.2	14.9
France ^{4/}	10.1	43.8	7.7	20.3	11.9
Germany ^{4/}	4.9	38.7	12.2	14.8	10.3
Greece	7.9	38.7	7.5	12.0	17.6
Iceland	2.6	32.6	9.8	2.5	16.7
Ireland ^{4/}	14.8	36.5	14.1	6.0	14.8
Italy ^{4/}	10.2	41.1	15.6	13.3	11.2
Japan ^{4/}	2.2	30.6	14.0	9.4	4.1
Luxembourg	1.6	48.6	18.4	13.8	12.5
Mexico ^{5/}	3.0 ^{6/}	18.3	8.9	2.6	6.3
Netherlands ^{4/}	7.4	46.7	15.1	17.8	11.9
New Zealand ^{4/}	9.4	36.6	20.7	0.5	12.7
Norway ^{4/}	5.7	46.4	15.8	12.1	16.7
Portugal ^{4/}	4.6	31.5	8.7	8.4	13.6
Spain ^{4/}	18.1	34.9	10.7	12.7	9.9
Sweden ^{4/}	4.3	51.9	20.6	15.7	13.8
Switzerland	2.2	31.8	12.8	11.1	5.6
Turkey	8.1	21.8	7.3	4.3	6.3
United Kingdom ^{4/}	9.0	35.7	13.2	6.3	11.9
United States ^{4/}	6.5	29.5	12.5	8.8	5.0
Developing economies ^{3/ 7/}	7.3	18.3	5.2	2.2	10.2
Argentina	7.2	16.4	1.4	4.9	8.0
Brazil	5.1	22.2	4.1	4.8	11.6
Cote D'Ivoire ^{5/}	2.3	19.7	4.5	1.4	13.8
Egypt ^{5/}	9.2	21.1	7.8	4.2	8.2
India ^{5/}	5.3	12.1	2.2	1.0	8.6
Kenya ^{5/}	15.6 ^{6/}	18.6	6.2	0.5	11.5
Pakistan ^{5/}	5.2	13.4	2.1	0.1	10.6
South Africa ^{5/}	8.3	23.2	13.0	0.5	9.7
Transition economies ^{3/}	6.3	32.4	10.2	9.2	12.1
China	2.4 ^{6/}	14.6	3.4	...	9.1
Czech Republic ^{8/}	3.0	42.4	14.2	12.8	13.1
Estonia ^{8/}	1.5	31.2	12.2	8.7	10.0
Hungary ^{8/}	9.6	43.3	9.7	15.7	17.8
Poland ^{8/}	12.3	37.0	13.4	9.0	10.8
Russian Federation ^{5/ 8/}	0.7	37.2	12.0	7.2	14.1
Slovak Republic ^{8/}	10.4	41.4	14.4	11.3	15.1
Viet Nam	10.8	12.3	2.2	—	7.1

Sources: Economic Survey (Kenya); Government Finance Statistics (IMF); International Financial Statistics (IMF); OECD Economic Outlook (OECD); Reserve Bank of India Bulletin (India); Revenue Statistics (OECD); Short-Term Economic Indicators: Transition Economies (OECD); Year Book of Labour Statistics (ILO); country documents (IMF); and staff estimates.

^{1/} Data reported are averages for the years for which data are available within the period 1990–93.

^{2/} The breakdown of tax revenue is not exhaustive.

^{3/} Unweighted average.

^{4/} OECD standardized unemployment rates are reported.

^{5/} Social security and payroll contributions have been added to total tax revenue as conventionally reported in the source documents.

^{6/} Urban unemployment.

^{7/} Except for Brazil and Pakistan, tax revenue data pertain to central government only.

^{8/} Unemployment rates reported are based on unemployment registration data.

Table 2. Statutory Tax Rates of Social Security and Payroll Taxes, 1993 ^{1/}

(In percent)

	Employee	Employer	Total
OECD countries ^{2/}	10.4	19.8	30.2
Australia	--	--	--
Austria	16.9	25.0	41.8
Belgium	13.1	34.3	47.3
Canada	5.5	9.3	14.8
Denmark	2.6	--	2.6
Finland	4.0	20.9	24.9
France	19.0	37.3	56.3
Germany	18.4	19.8	38.2
Greece	15.8	27.5	43.3
Iceland	4.0	23.0	27.0
Ireland	8.8	13.5	22.2
Italy	9.9	47.9	57.9
Japan	11.7	19.8	31.5
Luxembourg	17.5	17.5	35.0
Mexico	4.9	20.6	25.4
Netherlands	41.4	13.3	54.7
New Zealand	0.8	1.9	2.7
Norway	7.8	16.7	24.5
Portugal	11.0	24.5	35.5
Spain	5.9	32.8	38.7
Sweden	1.0	31.4	32.3
Switzerland	8.3	14.5	22.8
Turkey	14.0	25.0	39.0
United Kingdom	11.0	4.6	15.6
United States	7.7	13.9	21.5
Developing economies ^{2/}	7.0	17.6	24.6
Argentina	15.0	31.4	46.4
Brazil	9.0	27.8	36.8
Côte d'Ivoire	1.6	11.4	13.0
Egypt	13.5	34.0	47.5
India	11.0	18.7	29.6
Kenya	5.0	5.0	10.0
Pakistan	--	12.0	12.0
South Africa	0.9	0.9	1.8
Transition economies ^{2/}	5.1	32.9	38.1
China	3.0	17.5	20.5
Czech Republic	13.5	35.0	48.5
Estonia	--	33.0	33.0
Hungary	11.5	53.0	64.5
Poland	--	48.0	48.0
Russian Federation	1.0	39.0	40.0
Slovak Republic	12.0	38.0	50.0
Vietnam	--	--	--

Sources: Social Security Programs Throughout the World (U. S. Department of Health and Human Services); The Tax/Benefit Position of Production Workers (OECD); Taxation and Investment in Central and East European Countries (International Bureau of Fiscal Documentation); and country documents (IMF).

^{1/} Only explicit assessments on payroll are reported; unweighted averages are taken where multiple rates apply and no information is available on a weighted-average basis.

^{2/} Unweighted average.

In most OECD countries, unemployment rates vary according to age and gender. Young people typically experience the highest rate of unemployment; this represents, in part, a frictional phenomenon, as labor turnover is higher for this group, presumably due to the relatively low levels of accumulated firm-specific human capital associated with workers early in their careers. Unemployment rates for women have remained persistently higher than for men, although unemployment differentials by gender seem to have systematically narrowed. There are large differences among OECD countries in the share of long-term unemployed, with a very high and typically rising share in most EU countries compared to a much lower share in North America and Japan.

Level and structure of taxation. Statistics on tax revenue and unemployment suggest no simple relationship between the overall tax ratio and its changes on the one hand, and the level and changes in the unemployment rate on the other. This is not because there is a lack of variability across OECD countries in their tax policies, tax structures, or tax burdens. For example, the total tax-to-GDP ratio varied from about 18 percent in Mexico and 22 percent in Turkey to about 52 percent in Sweden in 1990-93. Significant differences in tax structures are also obvious, with the share of taxes on labor (in the form of social security and payroll contributions) varying considerably within the group of high-tax countries (e.g., between Denmark with a low share and Sweden with a very high share), as well as within low-tax countries (e.g., between Australia with a low share and Switzerland with a high share).

One also observes a large variation in the statutory rates of social security and payroll taxes. In part, this reflects differences in the generosity and coverage of benefits, but there are also variations in the relative weights of schemes financed by obligatory contributions, "private" or nonobligatory schemes, and schemes financed by general taxes. Total statutory rates of social security contributions and payroll taxes are very high (i.e., above 50 percent) in France, Italy, and the Netherlands, but very modest or nil in Australia, Denmark, and New Zealand.

Yet comparing taxes and unemployment, there is no clear pattern. One finds a wide variation in the rate of unemployment, both among countries with high tax ratios (e.g., Norway, Sweden, and the Netherlands have traditionally had a low unemployment rate, while Denmark and France have a high unemployment rate), and among countries with low tax ratios (e.g., the United States has a low rate but Turkey has a high rate of unemployment). Much of the literature discussed in Section 2 attempts to unravel the factors underlying these conflicting results.

b. Developing economies 1/

Nature of unemployment. Any discussion of unemployment in developing countries must begin with the recognition that the available data on unemployment largely masks the dimensions of the problem. Typically, observed unemployment data relate to the formal sector and primarily comprise secondary workers and those with a loose attachment to the labor force (the so-called "luxury unemployment" hypothesis) who are in a good position to undertake extensive search for jobs in the higher-paying and more secure formal sector. 2/ Where formal sector jobs are not available, unemployed primary workers tend to be absorbed into the informal sector or rural activities, including agriculture. These largely unobserved and unmeasured unemployed and underemployed are likely to be a far more substantial group.

Among those covered in the statistics, the unemployed tend to be young, more educated than average, often have not previously held a job, and tend to be unemployed for long periods. That many of the measured unemployed in these economies are better educated may reflect an education policy that favors higher education per se, and also suggests a weak link between the school system and the skill needs of the economy. 3/

For the sample of developing economies covered by this paper, the unweighted average of measured unemployment rates over the 1990-93 period, at over 7 percent, is similar to that in OECD countries but somewhat higher than that in the sample of transition economies. 4/ While the data suggest that, as a group, the countries in the sample have experienced a rise in their formal sector unemployment rates in the last decade (from slightly above 5 percent in the early 1980s), 5/ for most countries, the increase has been relatively small (the exception being Egypt). This is

1/ The sample includes low-income countries (India, Kenya, and Pakistan, with per capita GNP of 270, 290, and 430, respectively), lower-middle income countries (Côte d'Ivoire and Egypt, with per capita GNP of 630 and 660, respectively), and three higher-income countries (Argentina, Brazil, and South Africa, with per capita GNP of 7,290, 3,020 and 2,900, respectively). All per capita figures are in 1993 U.S. dollars. See World Bank (1994).

2/ This view was first described and quantified to some extent by Myrdal (1968). See also Udall and Sinclair (1982). Recent evidence on the composition of unemployment is discussed at length in Horton et al. (1994) and Turnham (1993).

3/ This contrasts with some European countries, where pervasive apprenticeship programs provide young people with continuity between formal schooling and occupational careers.

4/ Many high-performing Asian developing economies not included in the sample have, in general, much lower average unemployment rates, e.g., Hong Kong (1.8 percent), Korea (2.5 percent), Singapore (1.9 percent), and Thailand (3.2 percent).

5/ See Horton et al. (1994).

particularly the case when account is taken of the growth in their urban labor forces as a result of both population increases and rural migrations. There has been a large expansion in informal sector employment, including self-employment, to the point that the shares of formal sector employment in the total labor force are actually lower now than those in the early 1980s in most of the sample countries, and quite noticeably lower in several of them. 1/

Level and structure of taxation. The unweighted average level of total tax revenue in 1990-93 in the sample of developing economies, at about 18 percent of GDP, is significantly lower than that in both OECD countries and in the sample of transition economies. Total tax revenue ratios among the low-income countries range from about 12 percent in India to about 19 percent in Kenya. While the ratios are generally higher among the high-income countries (ranging from about 16 percent in Argentina to about 23 percent in South Africa), there is no clearly discernible relationship between these tax ratios and the sample economies' unemployment rates. 2/

Differences in the tax structure across the sample economies also offer little insight as to the sources of variability in their unemployment rates. Most developing economies show much less reliance on consumption taxes than either OECD countries or transition economies, although there are significant country-to-country variations. 3/ The relatively low levels of revenue from social security and payroll taxes in the sample of developing economies are mirrored by the generally low statutory rates for these taxes; the principal exceptions are Argentina, Brazil, India, and Egypt, where the statutory rates are comparable to those in many of the OECD countries. 4/

1/ The fall in formal sector employment in many developing economies (e.g., Argentina, Bolivia, Brazil, Côte d'Ivoire, Kenya, and Malaysia) is discussed in Horton et al. (1994) and a number of Fund country documents. In South Africa, for example, the share of the labor force employed in the formal sector fell from about 71 percent in 1983 to about 56 percent in 1992.

2/ Among the high-performing Asian developing economies, the correlation between unemployment rates and total tax revenue-to-GDP ratios is also weak. For example, for the four countries noted earlier, their average total tax ratios are: Hong Kong (9.9 percent), Korea (17.4 percent), Singapore (17 percent), and Thailand (17.2 percent).

3/ With regard to consumption taxes, there has tended to be a gradual move away from trade taxes to domestic sales taxes as economies develop and their domestic production and consumption bases expand.

4/ South Africa, with a total rate of only 1.8 percent in 1993, is a conspicuous outlier. In South Africa, contributions from payroll taxes finance only unemployment, sickness, and maternity benefits; while old age, disability, survivor pensions, and child support grants are financed from general budget revenue.

c. Transition economies

Nature of unemployment. Unemployment in transition economies has mostly been driven by the process of reallocating resources, including labor, associated with economic reforms. This has been the case even in those economies where the problems of transition have combined with more conventional development issues (e.g., China and Vietnam). 1/ The paucity of available data notwithstanding, labor shedding by the state sector seems to have been substantial. In a sample of countries, by 1992, state employment had been reduced by 17 percentage points of total 1990 employment; the simultaneous increase in private sector employment, although significant, has not been sufficient to offset this decline. 2/

Unemployment rates vary widely across transition economies. 3/ The group of European transition economies, other than those of the former Soviet Union (FSU), has higher rates of unemployment than the others. Available data for this group show two-digit rates of registered unemployment for all but one country (the Czech Republic) and an average rate of unemployment close to 12 percent of the labor force (i.e., about 60 percent above that of the OECD countries and significantly above that of most neighboring nontransition economies). 4/ Additionally, there is evidence indicating that labor force participation rates have declined in most European transition economies reflecting, to some extent, discouraged

1/ China and Vietnam are classified as developing economies in IMF (1995d).

2/ See Blanchard et al. (1995). Formal enterprise ownership changes accounted for part of the shift in employment from the public to the private sector--particularly in the Russian Federation. Owing to the slow process of privatization, however, most of the decline in public sector employment by 1992 represented labor shedding rather than ownership transfers. Conversely, a large proportion of the increase in private sector employment corresponded to job creation. The sample of countries covered comprises Bulgaria, the Czech Republic, Hungary, Poland, Romania, the Russian Federation, and the Slovak Republic.

3/ Unless otherwise stated, unemployment data refer to registered unemployment, i.e., the number of unemployed registered with unemployment offices. This is a wider concept than that based on the number of recipients of unemployment benefits, although it possibly still covers only a fraction of what would be considered unemployment according to standard survey-based definitions. More accurate and informative statistics based on labor force surveys have only recently become available for a few transition economies.

4/ Based on 1993 data for Bulgaria; and on 1994 (mid-year) data for the Czech Republic, Hungary, Poland, Romania, and the Slovak Republic. These figures might still understate the magnitude of unemployment: available survey-based assessments of unemployment in European transition economies (methodologically comparable to those employed in OECD countries) suggest higher unemployment rates than those based on registered unemployment. See OECD (1994b), OECD (1994d), and OECD (1995d).

workers who desist from seeking jobs. In contrast, the FSU countries tend to have lower rates of registered unemployment, averaging 1.5 percent of the labor force in 1993. However, alternative estimates based on labor force surveys along the lines of OECD/ILO standards--as opposed to registration in unemployment offices--indicate that unemployment rates in these countries could be three or four times higher (though generally still lower than those in most European transition economies). ^{1/} There is also evidence of significant labor hoarding by SOEs, notably in the Russian Federation. ^{2/}

Some transition economies have seen unemployment associated with market-oriented structural changes compounded by the process of reallocation of labor common to other developing economies. Thus, for example, even in the context of strong output growth, China has experienced the problems of accommodating increased labor migration to urban and more industrialized areas while attempting to maintain the pace of economic transition and liberalization of the labor markets. ^{3/}

The percentage of long-term unemployed among the jobless averages about 39 percent in non-FSU European transition economies--about 35 percent higher than that of the OECD countries. ^{4/} Long-term unemployment seems to be more pronounced in countries with comparatively high unemployment rates (e.g., Bulgaria, Hungary, and the Slovak Republic) and is associated with low exit rates from unemployment. ^{5/} Moreover, a significant proportion of the outflow from the ranks of the unemployed corresponds to persons who have abandoned the labor force rather than found jobs. As regards other characteristics of the unemployed, evidence from employment surveys conducted in a sample of transition economies indicates that the incidence of unemployment by gender, age, and educational attainment is similar to that of industrialized market economies with similar unemployment rates. ^{6/}

^{1/} See Commander and Yemtsov (1995) and Standing (1994). Unemployment data based on OECD/ILO standards for FSU and European transition economies are not yet available on a regular and reliable basis.

^{2/} Labor hoarding in the Russian Federation and other transition economies can take the form of administrative leave, production stoppages, furloughs, prolonged maternity leave, etc. Some estimates of this type of overstaffing for industrial enterprises in the Russian Federation are as high as one third of the industrial labor force. See Commander and Yemtsov (1995) and Standing (1994).

^{3/} See, for example, Hu (1994).

^{4/} In 1992, long-term unemployment represented 28.6 percent of total unemployment in OECD countries and 42.2 percent in EU countries. Long-term unemployment refers to persons unemployed continuously for more than a year. See OECD (1994b).

^{5/} The exit rate of those who found jobs in 1992 ranged from 1.5 percent of the unemployed in Bulgaria to 19.4 percent of the unemployed in the Czech Republic. See Boeri (1995) and OECD (1994d).

^{6/} See primarily OECD (1994d), but also OECD (1994b) and Blanchard et al. (1995).

Level and structure of taxation. While the average level of payroll and consumption taxes in transition economies during the period 1990-93 is broadly similar to that of OECD countries, their average income tax burden is noticeably lower, largely reflecting the difficulties experienced by these economies in bringing nonwage income into the tax net and possibly the existence of substantial informal sectors. As with the other two country groups, there is no clear relationship between variations in unemployment rates and the levels and structures of taxation. Indeed, it is interesting to note that countries with relatively high total tax burdens and statutory payroll tax rates are associated with both comparatively low rates (e.g., the Czech Republic and the Russian Federation) and high rates (e.g., Hungary and the Slovak Republic) of measured unemployment. 1/

Statutory payroll tax rates in the sample of transition economies are at levels comparable to those in the OECD countries, but are much higher in general than those in the sample of developing economies. In a broader sample of 11 European and FSU transition economies for which information is available, the average statutory tax rate over the 1992-94 period on payroll (inclusive of employers and employees contributions to social security, unemployment, and other funds, but exclusive of personal income and excess wage taxes) is about 48 percent in non-FSU European countries and about 40 percent in FSU countries, with some of the highest rates to be found in the Slovak Republic (50 percent) and Hungary (64 percent). 2/ Statutory payroll contributions are lower in China (varying around 20 percent according to region). An explicit system of payroll taxation has not yet been implemented in Vietnam.

2. Tax policy effects on unemployment

a. OECD countries

The policy focus. In the two decades since the first oil shock, rising--and often high--unemployment has been a predominant socioeconomic issue in the policy debate in most OECD countries. Many empirical studies have tried to assess the complex interaction of the different structural and cyclical factors that generated this disorder in the labor market. At the policy level, a number of initiatives have been implemented in order to combat unemployment, ranging from training schemes through industrial and

1/ A Fund staff exercise found no simple correlation between statutory rates of payroll taxes and unemployment rates or changes in unemployment rates in a sample of transition economies. The correlation between tax burdens and unemployment was found to be somehow higher, although still with low statistical significance.

2/ From various tax sources and Fund country documents. The non-FSU European countries comprise Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, and the Slovak Republic. The FSU countries comprise Belarus, Kazakhstan, Latvia, and the Russian Federation. When several statutory rates are in force under the general regime, the average of them has been taken.

regional policies, to social and fiscal policies, including taxation measures. The effectiveness of this broad range of policies would hinge on whether they have appropriately addressed the underlying market imperfections--including tax-induced distortions--that have resulted in the insufficient demand for labor. ^{1/} Based on the available empirical studies on the relationship between taxation and unemployment as well as on previous and current policy debates in OECD countries, three channels of tax policy effects would appear particularly important. ^{2/}

First, social security contributions, payroll taxes, and personal income taxes may adversely affect the cost of labor and thus reduce labor demand. In 1992, the marginal tax wedge comprising these three taxes ranged from under 20 percent in Japan to about 60 percent in Belgium and Denmark, and it seems to have increased in many countries in the recent decade or so. ^{3/} Furthermore, tax reforms implemented during the last two decades generally seem to have increased the overall tax burden on those with low earnings relative to those with higher incomes. It is sometimes argued that a higher tax wedge will be offset, at least in the longer term, by lower wages, but this wage flexibility may not materialize due to labor market imperfections as reflected, for example, in strict minimum wage provisions and high replacement ratios of unemployment benefits. Particular attention in OECD countries has been paid to employers' contributions, which generally are much higher than those required of employees, and which usually bear relatively heavily on those with low earnings (i.e., the group of people who are most vulnerable to unemployment, because of ceilings on contribution levels). This problem has been recognized as particularly important in, for example, Belgium, France, Ireland, Italy, and the Netherlands, but reforms have been constrained by the very heavy budgetary costs associated with a reduction of these taxes.

Second, the presence of high marginal effective tax rates (METR) emanating from the combined effect of withdrawal of benefits and increased taxes as earnings rise, has been considered an important determinant of unemployment developments. High METRs often provide a significant disincentive to job search and increased work effort. In many OECD countries, METRs in the range of 60-100 percent are not unusual, and small minorities even suffer rates of above 100 percent, thus involving a financial loss if a person starts working (e.g., in Germany and the

^{1/} The effectiveness of a number of active labor market programs, including those involving employment subsidies, in selected countries is reviewed in OECD (1993). See also Hamermesh (1993).

^{2/} The discussion draws in part from OECD (1994c) and OECD (1995c).

^{3/} The concept of the tax wedge in the present context is defined specifically as the difference between wages gross of the taxes (i.e., the employer's gross labor costs) and wages net of the taxes (i.e., the employee's take-home pay) of the average production worker in a country. The marginal tax wedge is the change in the tax wedge resulting from a unit change in the employer's paid-out wages (i.e., the employer's gross labor costs net of its social security and payroll contributions).

Scandinavian countries). It also seems to be a fairly general phenomenon in OECD countries that high METRs are unevenly distributed across groups of the population, with an above average incidence on women and single parents. For the group of people affected by excessive METRs, and who in addition have very low incomes, the situation has often been referred to as the "poverty trap." Typical approaches to counter this situation have been to increase the income threshold before means-testing sets in (Canada, the United Kingdom), to reduce marginal tax rates (Denmark, the United Kingdom), or to provide benefits to those already working (Australia, Ireland, the United Kingdom, and the United States). 1/

The third key policy problem in OECD countries--which is in part related to the question of high METRs--pertains to the adverse impact on unemployment of high replacement ratios associated with unemployment benefits. As noted in Chapter II, high replacement ratios may affect unemployment by reducing the incentive to seek work, and by affecting the relative incentives of the parties in wage bargaining. 2/ Relatively high replacement ratios for some or all categories of labor, particularly during the first year of unemployment, are found in, for example, Canada, Denmark, Finland, France, the Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland. The incentive impact also depends on the interaction of unemployment benefits with other benefits, on whether or not benefits are taxable, and on whether benefits are differentiated according to family situation (e.g., single parents, the number of children, etc.). Some OECD countries have tried to resolve these problems by introducing supplementary income support schemes for families with low earnings (i.e., support is available only when the recipients are employed) to raise work incentives for the low-paid (Australia, Canada, Ireland, the United Kingdom, and the United States).

It is interesting to note that the issue of the relative level of taxation of labor and capital has generally not been key in the unemployment discussion in most OECD countries (Belgium and Ireland are two exceptions), although many employ a number of different investment incentives (involving tax relief) to stimulate capital formation, with a potentially adverse impact on employment. 3/

The empirical literature. Because different taxes in a given country affect the real wage level and thus the demand for labor to differing

1/ An increase in the income threshold for means-testing purposes is not necessarily associated with an increase in the overall generosity of unemployment benefits. In Canada, for example, unemployment benefits have been reduced in recent years.

2/ For empirical evidence, see, for example, Alba-Ramírez and Freeman (1990) for the case of Spain.

3/ General investment allowances or credits are available in Austria, Belgium, Finland, Greece, Iceland, Luxembourg, the Netherlands, Spain, Sweden, and Turkey. Investment incentives in OECD countries are reviewed in OECD (1991).

degrees, most empirical studies focus on taxes which affect the tax wedge on labor directly. As it turns out, if the total tax wedge on labor is defined as the difference between gross labor costs to employers and real consumption which can be financed from after-tax wages (the tax wedge so defined incorporates, therefore, the effects of payroll taxes, income taxes, and consumption taxes), the correlation between it and the level of unemployment is insignificant. Tax wedges of around 60 percent coexisted with unemployment rates as low as 3 percent (e.g., Sweden) and as high as 11 percent (e.g., Italy) in 1991. In other words, the total tax wedge on labor appears a poor explanatory factor regarding the level of unemployment. ^{1/}

A clear negative correlation is found, however, across selected OECD countries between the social security contribution rate of employers and the share of wages in the value added of the business sector. This might show that wages are reduced as employer's social security rates are increased, but it may also reflect a tendency to reduce the amount of labor use as employer's contributions are raised. This points to the potential importance of the level of payroll taxes on unemployment rates. That the taxation of labor, and in particular labor taxes levied on employers, may have a measurable adverse impact on unemployment has been suggested by a number of time-series analyses for individual countries, although the body of empirical work cannot be said to present a universal picture of this relationship. The studies indicate that there are significant differences among countries in the way taxes affect real labor cost directly or unemployment indirectly.

Table 3 provides a survey of selected available studies, whose important findings may be summarized as follows:

(1) Increases in the overall tax wedge over certain periods seem to explain part of the increase in the unemployment rate in a number of countries, although in some cases, opposing results are obtained from different studies for a given country.

(2) In cases where taxes are found to be important, there seems to be a tendency for payroll and social security contributions, in particular those paid by employers, to be reflected more or less fully in higher total labor cost, whereas only partial or no shifting occurs for income and consumption taxes (i.e., they are primarily borne by employees).

^{1/} Such tax wedge analyses are, however, not without problems, in particular because they rely on the wedge calculated at a given income level. For the calculations reported in OECD (1994c), the income level chosen for each country is that of an average production worker. At these income levels, the tax reforms implemented during the 1980s and 1990s have reduced marginal tax rates in many OECD countries, but at the same time they have increased the tax burden on groups with lower levels of income. This could have a potentially important impact on unemployment, which is generally concentrated among those with low skills and earnings.

Table 3. Summary of Findings of Selected Empirical Studies on OECD Countries

Issue	Summary of Finding	Country	Source
<u>Cross-country comparisons</u>			
Impact of tax wedge on unemployment	Significant in some countries	Selected OECD countries	Bean et al. (1986)
Impact of taxes on wage costs	Direct taxes and social security contributions are shifted forward into wages	10 OECD countries	Knoester and van den Windt (1987)
Impact of size of overall tax wedge on unemployment	No significant correlation found across countries	Selected OECD countries	OECD (1994c)
Degree of real wage cost responsiveness to tax changes	Widely different responses in different countries; high flexibility of wages in the United States and the United Kingdom; low in Canada and Germany	Selected OECD countries	Tyrväinen (1994)
<u>Time series/specific countries</u>			
Impact of benefits on unemployment	Generous benefits increase the duration of unemployment	Spain	Alba-Ramirez and Freeman (1990)
Impact of different taxes on real wages	Employer's payroll taxes affect wages, but not PITs	Denmark	Andersen and Risager (1990)
Impact of tax wedge and replacement ratio on unemployment	Rise in tax wedge and replacement ratio explain most of the increase in unemployment	Ireland	Browne and McGettigan (1993)
Impact of tax on real wage cost	Significant in short run	Denmark, Sweden, Norway	Calmfors and Nymoen (1990)
Impact of payroll taxes on unemployment	Significant impact of payroll taxes: explains 2.5 percentage points of increase in unemployment	Canada	Coe (1990)
Impact of tax wedge on unemployment	Every 1 percent increase in tax wedge accounts for 0.24 percent increase in actual unemployment	Spain	Dolado et al. (1986)

Table 3 (concluded). Summary of Findings of Selected Empirical Studies
on OECD Countries

Issue	Summary of Finding	Country	Source
Impact of tax wedge on wages	Only a weak long-term link	Finland	Eriksson et al. (1990)
Impact of different taxes on unemployment	Modest impact from indirect and personal income taxes, significant from employer taxes on labor (accounts for a 1.4 percentage point increase in unemployment)	United Kingdom	Layard and Nickell (1986)
Impact of average and marginal tax rates on unemployment	Average rates have a negative impact and marginal rates have a positive impact, on unemployment	United Kingdom	Lockwood and Manning (1993)
Impact of different taxes on unemployment	A reduction of 5.7 percentage points in employer's payroll taxes will reduce unemployment by 1 percentage point	France	Moghadam (1994)
Determinants of wages	Evidence of hysteresis and insider-outsider effects is confirmed	Belgium	Moghadam and van Rijckeghem (1994)
Impact of tax wedge on real wages	Significant in short run	Finland, Norway	Newell and Symons (1985)
Impact of different taxes on real wages	Employer's payroll taxes affect wages, but not PITs	Norway	Nymoen (1989)
Impact of taxes on wages	Employer's social security contributions enter significantly into wage settlements	Austria	Pichelmann and Wagner (1986)

Source: Staff compilation.

(3) Many studies find that the impact of taxes on unemployment and/or on their forward shifting into wage costs are strongest in the short run, and that the effect fades or even disappears in the longer run when the real wage level has adjusted to the tax change.

(4) A few studies suggest that a distinction should be made between the impact on real wages of increases in the average and marginal tax rates.

(5) Some studies indicate large differences between countries in the behavioral reaction of labor markets to tax changes. For example, a recent study ^{1/} indicates that in countries such as the United States and the United Kingdom, real wage responsiveness is high (or real wage resistance is low, so that taxes do not significantly affect labor costs and thus unemployment in the long run), whereas the opposite case is found in, for example, Germany.

(6) A few recent Fund studies ^{2/} for selected OECD countries point to the fact that, although taxation has a measurable independent impact on unemployment, many other--and probably more important--factors are at play, particularly labor market rigidities as reflected in the prevalence of hysteresis and insider-outsider behavior.

While no clear or universal picture emerges from these studies with regard to the impact of taxes on real wages, unemployment, or the length of time any effect is expected to persist, some do suggest that, depending on prevailing structural rigidities in labor markets, tax increases and, in particular, increases in payroll taxes levied on employers may well have an adverse impact on unemployment. Hence, the basic problem seems to be not so much taxes per se, but the fact that taxation may exacerbate the impact of already existing distortions and rigidities in the labor market. The factors most often mentioned as reflections of such rigidities or negative incentive effects are high minimum wages, elaborate labor protection provisions, and high replacement ratios.

b. Developing economies

There has been significant concern about the inability of developing economies to make full use of their labor force potential or to bring unemployment down. In tackling this problem, the constraints faced by policymakers in these economies differ in a number of important respects from those in the OECD. These include a high share of agriculture, a segmented market structure, a low level of monetization and observable financial intermediation, a limited number of reliable tax handles, and an underdeveloped administrative machinery. Few empirical studies of taxation

^{1/} Tyrväinen (1994).

^{2/} See, for example, Moghadam and van Rijckeghem (1994). See also Santaella (1994) for a review of empirical studies on unemployment in Ireland.

and unemployment in these economies have been carried out, largely as a result of data limitations. However, three areas of taxation are commonly regarded as having an important impact on labor market developments; capital taxes, agricultural taxes, and consumption taxes. 1/

In the area of capital taxation, it has been argued that there is a bias favoring capital investment in the tax structures of many developing economies, leading to the adoption of overly capital-intensive techniques and distortions in production, as well as causing a significant revenue loss. 2/ Raising the tax burden on capital could, therefore, increase the demand for labor, with the quantitative impact being dependent on the relevant elasticities of demand and supply of goods and factors and of factor substitution, on which little data are available. All the countries in the sample have in place corporate income taxes (CIT), containing incentives to promote new investments. In Pakistan, for example, certain specified industrial activities are exempt from the CIT; in Brazil and other countries, incentives have been used to encourage capital investments in economically depressed or remote areas; and in Egypt, corporate tax holidays of various lengths and other incentives are available for many types of new investments. Another way that the tax burden on capital has been reduced is through preferential trade tax provisions. 3/ India, however, has proven the exception: imported capital goods have been taxed in order to raise a

1/ For a general survey of tax issues in developing economies, see Burgess and Stern (1993). Nontax-related policies, such as layoff restrictions, are often also important in affecting labor market outcomes. A number of countries (e.g., Argentina, Brazil, Egypt, India, Pakistan, Zimbabwe) impose impediments on the shedding of labor. These restrictions can create unemployment, if it is not possible for enterprises to lower average wages or to replace permanent workers with temporary ones. They also make firms more cautious in hiring permanent workers. In Zimbabwe, job security regulations have been frequently cited by employers as a significant factor in employment decisions, particularly in cyclical and seasonal sectors, including agriculture.

2/ A primary reason for favoring capital in the tax system has been to attract foreign investment. In some cases, this tax bias is reinforced by other policies, in particular by the overvaluation of the currency, when, as in many developing economies, a significant amount of the capital is imported. Any distortion arising from the preferential taxation of capital must, however, be weighed against the potential positive impact it might have on growth in the long run, as noted earlier. For a discussion of a number of aspects of investment incentives in developing economies, see Shah (1995).

3/ Capital goods are exempted from import duties in Argentina, Brazil, Côte d'Ivoire, and South Africa; and preferential rates of duty are applied to capital imports in Kenya and Pakistan. Many other developing economies not included in the sample also provide preferential trade tax treatment to imported capital goods.

significant amount of revenue and provide a high degree of protection to the domestic capital goods-producing sector. 1/

In the area of agricultural taxation, urban-rural migration, often an important determinant of urban unemployment and urban informal sector employment, has been argued to be affected by different elements of tax policy, particularly those relating to the agricultural sector. Changes in agricultural tax and pricing policies that effectively raise net agricultural and rural incomes would reduce incentives to migrate out of agricultural employment. 2/ A prominent instrument by which agriculture had been taxed in the past was the taxation of exports; export taxes are now unimportant in most developing economies. 3/ In some countries, agricultural producer prices were kept at artificially low levels, which had an effect on production equivalent to that of a tax on output, and an effect on consumption equivalent to that of a subsidy; 4/ such price controls are, however, being increasingly relaxed. Hence, the general effect of recent reforms of agricultural pricing and tax policies has been to moderate the shift of production and employment out of agriculture.

Finally, it has been argued that employment is affected by the impact of consumption taxes on output prices. Since capital-labor ratios vary greatly across sectors, labor demand would depend on the composition of output (as well as on relative factor prices). In some countries, consumption taxes explicitly favor labor-intensive firms and sectors. For example, in India, smaller (in terms of turnover) and presumably more labor-

1/ India raised an average of about 30 percent of its tax revenue from trade taxes in 1990-93, compared to 17 percent for the rest of the sample of developing economies. In addition, India is unique in levying excise taxes on capital goods.

2/ World Bank (1993) noted that the gap between urban and rural incomes is generally much smaller in the high-performing Asian developing economies than that in other developing economies; the level of agricultural taxation in the former has typically also been lower than that in the latter.

3/ Export duties have been eliminated in Argentina, South Africa, and Kenya; they are virtually abolished in Brazil, Egypt, and Pakistan; and Côte d'Ivoire has eliminated export duties on all products except cola nuts, coffee, cocoa, and timber. India recently proposed to eliminate duties on finished leather exports. United Nations (1993) noted that the explicit tax burden borne by the agricultural sector in a broad range of developing economies fell in the 1980s, as income and consumption taxes failed to fully compensate for the reduction in, or elimination of, export taxes.

4/ Indeed, a common argument made in much of the development literature is that agriculture has borne a high implicit tax burden through government food price policy, often to the benefit of urban citizens. See Sah and Stiglitz (1992) for an extensive discussion. Pricing policy can raise significant revenue. For example, Deaton and Benjamin (1988) concluded that coffee and cocoa pricing policies in Côte d'Ivoire had the effect of raising as much as 40 percent of government revenue, broadly defined, in recent years.

intensive firms enjoy excise tax exemptions, and concessional rates for certain sectors are also available. Similarly, cottage industries with less than 15 workers in Pakistan are exempted from sales taxes, and many labor-intensive goods and services in Egypt are taxed at reduced consumption tax rates.

As noted earlier, social security and payroll taxes are generally a much less important revenue source in developing economies than in OECD countries. A primary reason for this difference is the practical difficulties connected with operating comprehensive social security systems; indeed, coverage is often restricted to employees in the formal sector, thereby omitting those in the informal sector and in rural areas. 1/ As is usually the case, the impact of payroll taxation on unemployment would depend on its incidence. There is evidence that real wages are relatively flexible in developing economies, at least in the long run, implying that the imposition of direct taxes on labor income would not have a permanent adverse impact on employment in the formal sector. 2/ Conversely, a reduction in payroll and other labor income taxes would not be expected to have a lasting favorable impact on employment. 3/

c. Transition economies

In most transition economies, open unemployment had been virtually absent from the economic landscape until the onset of the reform process. Before then, overstaffing and wasteful allocation of labor was a pervasive characteristic of these economies. After the introduction of market-oriented reforms, including the liberalization of the labor markets, unemployment has, however, emerged, stemming from a combination of external shocks and remaining rigidities and distortions in many domestic markets.

There are several channels through which tax policy effects have had an impact, to varying degrees, on the labor markets of transition economies: (1) the tax system plays a crucial role in fiscal and macroeconomic stabilization efforts which, at this stage, are instrumental in attaining sustained job creation; (2) in many cases, tax provisions have been introduced to foster investment and job creation; (3) social security and payroll contributions are an important component of total labor costs and thus may adversely affect employment growth; (4) excess wage taxes, through

1/ Despite the difficulties, all Latin American countries and over 80 percent of other developing economies have formal social security programs, most of which were introduced since 1945. Another reason for the much lower payroll tax revenue ratios in developing economies than in OECD countries is that the share of wages in income tends to rise with per capita income. For a discussion of social security taxes in developing economies, see Ahmad et al. (1991).

2/ The evidence for real wage flexibility is discussed at length in Horton et al. (1994).

3/ Nevertheless, in some developing economies, reductions in payroll contribution rates have been adopted to encourage employment.

their effects on the average wage and on labor costs, have also impinged on job creation and the development of the emerging private sector; and (5) unemployment benefits and active labor market policies, depending on their nature, have enhanced or hampered the efficiency of labor markets.

The effects of taxation on unemployment in transition economies are primarily indirect at present--they largely reflect the impact of the macroeconomic stance on labor demand. From this standpoint, the crucial features of the tax system are its revenue potential and buoyancy, rather than the microeconomic incentives or distortions that it creates. Given the pronounced macroeconomic and fiscal imbalances that many transition economies have undergone, the macroeconomic dimension has, arguably, overwhelmed the significance of more direct links between taxation and labor markets.

In the longer term, the incentives and distortions introduced by the tax system may have lasting effects on the growth and employment potential of an economy. However, until now, the limited evidence currently available seems to suggest that tax provisions have had only a minor impact on the evolution of unemployment. Attempts to use exemptions and special tax treatments to affect the allocation of investment, to encourage the introduction of more labor-intensive technologies, or to foster the development of regions with high unemployment, seem to have had little influence on investment patterns and job creation. 1/

Nevertheless, job creation and investment promotion has been the explicit or implicit aim of many tax provisions and special tax regimes. For example, Hungary allows some deductions from the corporate income tax base for firms that hire unemployed workers. 2/ Similarly, in Poland, investment in regions affected by high unemployment is one of the criteria by which a more favorable treatment under the corporate income tax can be obtained. Many transition economies also introduced, during the initial stages of the reform process, generous tax allowances and incentives to selected foreign and domestic ventures in an attempt to pursue multiple--and often conflicting--objectives, including job creation. As reform advanced, some countries, for example, Estonia and the Czech Republic, have tended to remove these special treatments, but most others have kept or even extended them, for example, the Slovak Republic, Hungary, and Poland. 3/

As noted earlier, the role of payroll taxes in the evolution of employment in transition economies has not been uniform. This can be attributed

1/ See OECD (1995e) and Boeri (1995).

2/ Companies may deduct from their taxable base 70 percent of the social security contributions paid on new employees during the first 12 months, provided that the new employees were unemployed for more than 9 months and that the new hirings did not replace personnel dismissed during the previous 6 months.

3/ For a comprehensive treatment of tax incentives in transition economies, mostly in the context of foreign direct investment, see OECD (1995e).

to several factors. First, the dynamics of output and employment in transition economies are generally believed to be more dependent on macroeconomic events than on tax-induced changes in the cost of labor. In fact, high statutory tax rates on payroll could indicate that, in some cases, the payroll tax is one of the few available tax handles by which to mobilize revenue. Hence, a higher statutory tax burden on labor income has sometimes been associated with macroeconomic stabilization and fiscal consolidation efforts, with positive effects on investment and employment (e.g., the Czech Republic). Second, social security and other payroll-based contributions are a poor index of direct labor costs in some transition economies. While employers' outlays associated with the wage bill could be considered in some cases an accurate indicator of labor costs, in other cases, for example, China and most FSU countries, SOEs have been expected to provide a wide range of social benefits such as education, housing, etc., that are not funded directly by payroll taxes.

Another tax instrument that was introduced in the early stages of reforms in a number of transition economies is the excess wage tax, 1/ which penalizes, often at increasing rates, enterprise average wages beyond some given norm. 2/ Its objective has been twofold. First, it was introduced as part of the general incomes policy aimed at containing wage inflation. Second, in the presence of poor mechanisms of enterprise governance and monitoring in the state sector, the excess wage tax was meant to curb self-awarded pay increases. 3/ Evidence on the success of these taxes in containing wage pressures is still inconclusive. While in some countries (e.g., Poland) the tax has been credited with a significant contribution to wage restraint, in other countries (e.g., Estonia) the tax was soon repealed without noticeable detrimental effects on wage developments. 4/ In most cases, the evolution of the overall wage bill has been determined by factors beyond the purview of tax policy, and excess wage taxes seem to have hindered the necessary process of wage differentiation and prompted labor hoarding in the public sector. 5/

1/ Countries that introduced excess wage taxes included Armenia, Azerbaijan, Belarus, Bulgaria, the Czech Republic, Estonia, Hungary, Kyrgyz Republic, Latvia, Moldova, Poland, the Russian Federation, the Slovak Republic, and Turkmenistan. See Tait and Erbas (1995). Excess wage taxes were introduced in China in as early as 1985.

2/ In the Czech Republic, the tax base is the increase of the wage bill above some benchmark, which takes into account inflation and economy-wide guidelines, as well as firm-specific increases in productivity. The most common base for this tax is, however, that part of the wage bill that exceeds a given multiple of the minimum wage times the number of employees.

3/ Thus, in Poland, the excess wage tax ("Popiwec") only applied to SOEs.

4/ Countries that have repealed their excess wage taxes recently included Belarus, Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Poland, and the Slovak Republic.

5/ See Tait and Erbas (1995). The labor-hoarding effect of the excess wage tax could be lessened if the base of the tax incorporated a measure of labor productivity changes, such as that adopted in the Czech Republic.

The system of unemployment benefits in the FSU and European transition economies was comparatively generous at the outset of the reform process, when unemployment was extremely low. As the transition evolved and unemployment rates approached, or in some cases even exceeded, those of industrialized market economies, many countries attempted to reform and rationalize unemployment benefits and other policies related to unemployment. These reforms have generally encompassed tightening of eligibility rules and the introduction of time limits on the coverage of unemployment insurance. Simultaneously, unemployment compensation levels have been made less dependent on past earnings--substituting, instead, some across-the-board indicator such as the poverty line or the minimum wage. Still, unemployment compensation has been particularly eroded in countries which underwent inflationary episodes. 1/ Whereas funding for unemployment benefits and training programs may have become insufficient in several transition economies, a substantial portion of unemployment-related funds are being diverted to different forms of production and wage subsidies, with only marginal--even possibly adverse--effects on unemployment. 2/

Unemployment insurance is still in a developmental stage in both China and Vietnam. In China, unemployment services and benefits are being provided primarily by local and regional authorities at present, and their provision is also often the responsibility of the enterprise where the dismissed workers were employed. This local provision of unemployment-related benefits and services tends to hinder the interregional redeployment of labor resources. In Vietnam, during the retrenchment of 1988-93 (when approximately 1 million people were laid off from SOEs), redundant workers received one-time lump-sum compensations (based on length of employment) jointly financed by the concerned SOEs and the state budget in roughly equal shares. Additionally, coverage of unemployment benefits in these two countries is comparatively limited.

Overall, existing empirical studies have paid comparatively little attention to the direct links between tax policy and unemployment in transition economies and to the effectiveness of different active labor market policies. This apparent lack of interest might have been due to the limited availability of relevant and reliable labor statistics. At the same time, fiscal policies addressing macroeconomic imbalances or fostering the development of the emerging private sector have been perceived as having a larger impact on the dynamics of unemployment than tax policies that focus specifically on labor markets. As the transition to market mechanisms proceeds further, however, the design and evaluation of labor-related tax policies can be expected to become increasingly important in light of the current upward trend of unemployment and the difficulties encountered in reabsorbing labor shed by the state sector.

1/ For example, unemployment compensation in the Russian Federation, which is linked to both past earnings and the minimum wage, was estimated to be only about 13 percent of the average wage in 1994.

2/ See OECD (1993) and Boeri (1995).

IV. Fund Policy Advice: Recent Discussions and Prospective Options

This chapter reviews recent Fund policy advice in the area of taxation and unemployment provided to OECD countries and selected samples of developing and transition economies in the context of consultation and program missions. In addition, building on the discussions in previous chapters, this chapter identifies potentially important tax policy options--together with an assessment of their merits and limitations--in addressing the unemployment problem, with a view to forming the basis for prospective Fund advice in its work on surveillance and program design.

In general, the policy advice provided has been usually relatively far-reaching, but also fairly general in that it does not prescribe in detail how the recommended reforms are to be implemented, how the precise measures should be designed, and (frequently) how they are to be financed.

1. OECD countries

a. Recent Fund advice

Recent Fund advice pertaining directly to taxation and unemployment, or more generally labor markets, has focused on the level of taxes on labor (or the size of the tax wedge), structural rigidities in labor markets, and ways to alleviate these rigidities. With respect to the latter, recommendations have included, in particular, the scaling back of labor market regulations, loosening of minimum wage provisions, tightening of unemployment benefit provisions (e.g., reduction in replacement ratios, better targeting of benefits, and restrictions on benefit periods), decentralization of wage bargaining, promotion of policies to improve labor market mobility, and increased schooling and training. Recommendations regarding the size of the tax wedge usually aim at reducing the level of taxes on labor, in particular on low-wage earners, partly to increase demand for this category of labor and partly to improve work incentives for the lower paid, who bear a disproportionately large burden of unemployment.

b. Prospective advice on policy options

As reviewed in Chapter III, the available empirical evidence indicates that there is no simple relationship between unemployment and the level and structure of taxation in OECD countries. The most important factors underlying unemployment appear to be nontax related, such as rigidities in the labor market created by skill mismatches, low labor mobility, high minimum wages, and compressed wage differentials. Had labor markets been fully flexible, taxation might have had only an indirect impact through its effect on work incentives (albeit potentially important for long-term growth prospects). With less than full flexibility, taxation may also affect the level of labor costs and thus the demand for labor.

The main conclusion to be drawn from the empirical evidence is that policy initiatives to reduce unemployment should focus directly on the problem of labor-market rigidities. General tax reforms can only be

supportive in the sense that they may lessen the problems created by noncompetitive labor markets. Areas where tax policy could play an important role in this context are a reallocation of the tax burden from payroll taxes to broader-based taxes, and the streamlining of the unemployment benefits.

It was also noted in Chapter III that labor taxes, in particular in the form of employer-financed payroll taxes, have been a concern in a number of OECD countries, due to their potentially adverse impact on employment. Given the severe budgetary constraints confronting most of these countries, the relevant questions are the feasibility of shifting the tax burden in a revenue-neutral way from labor taxes to other taxes, and/or the extent to which reductions in labor taxes can be financed by reducing expenditures. 1/ On the question of switching tax bases, there are three options that seem to have generated considerable interest in policy debates, each of which has both merits and limitations.

First, switching the tax burden to consumption is a possibility for a number of OECD countries with a comparatively low level of consumption taxation. 2/ As consumption is, on average, broadly of the same size as wages in total income for OECD countries, and to the extent that consumption taxes are borne by consumers, a switch to, for example, a value-added tax (VAT) 3/ may have a beneficial impact on unemployment, because the tax in part would be paid out of nonlabor income (i.e., transfers and capital income). Such a switch may be constrained, however, by a number of factors, including the risk of increased demand for higher social transfers to offset higher consumption taxes. The possible move to an origin-based VAT in the EU, whose members comprise three fifths of the OECD countries, may also limit the scope of the switch in those countries that already have relatively high VAT rates. 4/

Second, while capital income is significantly smaller than labor income, there seems to be considerable scope in many countries to achieve a more balanced level of taxation of the two income sources by repealing the many tax reliefs offered to capital-intensive investment, which may work as an impediment to employment, as has been discussed in a number of countries. Such a move must of course be balanced against the risk of lower capital formation and thus lower future growth and real wages, as well as against

1/ The scope for expenditure reduction varies considerably among OECD countries. While not further pursued here, an appropriate expenditure policy, particularly with a view to reducing unproductive expenditures, clearly has important implications for unemployment. For an extended examination of unproductive expenditures, see IMF (1995c).

2/ It must be noted, however, that many of these countries already enjoy relatively low levels of unemployment.

3/ A VAT exists in all OECD countries except Australia and the United States.

4/ An origin-based VAT system would require harmonization of tax rates because it taxes goods and services according to where they are produced.

the constraints set by the high international mobility of capital. This latter factor calls for the possible introduction of generalized withholding schemes and for improved international cooperation between tax administrations.

Third, the increased utilization of environmental taxes (including energy taxes), which have actually been introduced or are being considered in a number of countries, has been held to entail a "double dividend" in the form of reduced pollution and increased revenues which can be used to reduce other (distortionary) taxes, such as those on labor. ^{1/} A switch from labor to environmental taxes may benefit employment only to the extent that "green" taxes are borne by persons outside the labor force. If introduced by a concerted action, consumer countries with market power may also shift the tax to producer countries via lower world market prices. The scope for introducing such taxes on a large scale is, however, questionable for a number of reasons: the tax base is comparatively limited, implying the need for relatively high tax rates and thus high efficiency losses compared to broad-based consumption taxes; there are considerable problems in designing these taxes to target precisely the polluting activities; energy taxes may be heavily regressive (although the degree of regressivity would vary from country to country); and competitiveness may be adversely affected for specific sectors or countries so that positive employment effects require extensive international coordination. ^{2/}

As reflected in recent Fund recommendations in this area, there is ample scope for a further tightening and streamlining of the social security legislation related to the provision of unemployment benefits. A few OECD countries have already moved in this direction. The objective should be to establish replacement ratios, eligibility criteria, and the duration of the benefits in a way which will not overly hamper job search efforts and induce unacceptably high transitional costs associated with unemployment. While the socially optimal level of unemployment benefits is seldom easily ascertainable, their financing costs and incentive effects suggest that possible policy options include cutting the link between benefits and previous earnings; decreasing the level of benefits with the duration of unemployment; and placing ceilings on the length of the period during which benefits may be received. These key parameters are, or have previously been, characterized by excessive generosity in some OECD countries. To prevent marginalization of the long-term unemployed and to combat hysteresis in the labor market, well-targeted and cost-effective training programs

^{1/} The double dividend can fail to materialize, however, if environmental taxes succeed in achieving their objectives, thus limiting their revenue potential. For this argument, see Bovenberg and van der Ploeg (1994). Nellor (1994) further argues that environmental taxes are not necessarily the best policy instrument for employment promotion.

^{2/} For a discussion of the conceptual and practical issues involved in implementing environmental taxes, see McMorran and Nellor (1994) and OECD (1994c).

should be applied to supplement the general unemployment benefit system. 1/

As noted in Chapter III, recent tax reforms in most OECD countries have generally reduced marginal tax rates for high-income earners, but have either barely affected the tax position of low-income earners, or have even increased their tax burden. Cutting taxes for the low paid may allow wages to fall without harming disposable incomes, unless precluded by minimum wage provisions. More attention could also be devoted to tax reliefs relating to low-income earners, particularly to alleviate the regressiveness of employer's payroll taxes which are believed, as noted earlier, to have adverse employment effects for those groups of labor (viz., low-skilled and low-income earners) that are particularly prone to the risk of unemployment, because of the bias these taxes produce in favor of high-skilled labor and the use of overtime. Such measures may also alleviate market rigidities by allowing a reduction in minimum wages without adversely affecting the income of low-wage workers.

With the elaborate social security systems prevalent in OECD countries, the combination of a withdrawal of social benefits and high taxation when an unemployed worker becomes employed has, in many cases, a significant adverse impact on incentives for active job search. As mentioned earlier, there are examples where these poverty trap problems imply excessive marginal effective tax rates at low-income levels. Much could be done to alleviate these problems and re-establish a positive financial reward for increased labor market participation by the people in question. Possible measures include lowering of the marginal tax rates at low levels of earnings, increasing the income level below which means-testing does not apply, and introducing income support schemes for low-income earners, as is seen in a number of countries.

2. Developing economies

a. Recent Fund advice

Although Fund staff identified a number of tax policy issues that have a direct bearing on the labor markets in the sample of developing economies under consideration, few specific recommendations in this area were

1/ In most OECD countries, expenditures on job training programs are already the highest among active labor market programs. Available evidence suggests that the effectiveness of training programs depends on how well they are targeted for specific vocations. See OECD (1993) for details.

offered. 1/ With respect to payroll and social security taxes, for example, note has been taken in some countries of poor compliance, large tax wedges, and steep progressivity at low income levels. The use of tax incentives to encourage employment in a number of countries has also been noted.

Fund advice on labor market policy has tended to emphasize the amelioration of structural rigidities in the labor market. 2/ It has frequently pointed out, for example, the importance of determining wages and employment by market supply and demand conditions, rather than by government legislation, public sector wage levels, or union pressure. Strengthening market factors would encourage the efficient allocation of labor across industries, leading to higher investment, more labor-intensive production processes, and faster output growth. Such advice has largely been motivated by concerns about the prevalence of regulatory constraints on the movement of workers between and within firms, minimum wage laws, high severance costs imposed on employers, and wage determination processes that have the effect of creating a large group of "outsiders" in urban labor markets. To address these concerns, Fund staff have recommended measures to improve the effectiveness of special employment programs, a differentiation of minimum wages to encourage hiring of young and inexperienced workers, and a decentralized wage-bargaining process. In addition, one country was advised to reform its health insurance and family allowance policy so as to reduce the costs of these programs to employers.

b. Prospective advice on policy options

The paucity of empirical evidence on the impact of taxation on unemployment notwithstanding, the earlier discussion suggests that tax policy advice in developing economies with a concern for reducing unemployment would call for (1) a greater neutrality in the taxation of capital and labor, (2) nonpunitive taxation of the agricultural sector, (3) a greater uniformity in taxing consumption goods under general consumption taxes, and (4) the avoidance of excessive payroll taxation.

Factors that are relevant in determining the appropriate level of capital taxation are diverse and complex. Clearly, employment considerations cannot be decisive; also important are efficiency and equity concerns in taxing capital goods and income from capital, as well as their consequent impact on saving, investment, and growth. Nevertheless,

1/ In one country, it was recommended that export duties on cocoa and coffee be replaced by a more general system of agricultural income taxation. The employment impact of this substitution was, however, not discussed. An example of employment-related tax policy advice provided to a country not included in the sample was the recommendation of a minimum tariff on imported capital goods to reduce the degree of protection afforded to its capital-intensive sectors.

2/ Evidence of labor market flexibility as an important contributing factor to growth has been cited by World Bank (1993).

measures to reduce the preferential tax treatment of capital could promote employment. For example, the removal of investment incentives that have lowered the cost of capital could improve the relative attractiveness of labor as well as reduce distortions in the allocation of capital and increase revenue. 1/

Removing tariff exemptions on imported capital goods that are currently in place in many developing economies could also lessen the bias in favor of the capital-intensive sectors of the economy, and produce a revenue impact that could be significant in circumstances where effective tax handles other than import duties are lacking. While this could lower the relative price of labor, it would do so only at some cost to consumers. As trade taxes do not improve competitiveness, they eventually work toward lowering exports and, over time, standards of living. 2/ Hence, the possible beneficial impact on employment from removing tariff exemptions on capital goods does not provide an adequate basis on which to impose high rates of import duty on such goods.

The agricultural sector in many developing economies plays an important role, as noted earlier, in providing both employment opportunities and a source of revenue for government operations. Tax and pricing policies with regard to agriculture can, therefore, have a profound effect on the labor market and government revenue. While recent agricultural reforms have been in the direction of increasing the profitability of agricultural production, through either eliminating export duties or narrowing the gap between world and domestic producer prices of agricultural commodities, the associated budgetary revenue loss must be addressed. Hence, the fundamental challenge for tax policy in this area has been the design of effective and equitable tax measures for this sector, so that agricultural incomes do not completely

1/ In view of the fact that investment incentives are extensively employed in many of the high-performing Asian developing economies, Tanzi and Shome (1992) speculated that the effectiveness of such incentives could depend less on their own characteristics than on the characteristics of the countries where they are used, for example, the quality of the civil servants and the efficiency of the public bureaucracy. Nevertheless, while acknowledging the potentially helpful role investment incentives could play in achieving certain economic objectives (e.g., the relocation of industries away from congested Bangkok in Thailand and the attraction of new technologies into Singapore), Fund staff have recently cautioned against their pervasive use because of the distortions and revenue losses associated with them. In a recent study, OECD (1994f) has found that investment incentives have not been the overriding factor in affecting the foreign direct-investment flows into these economies.

2/ See World Bank (1995).

escape the tax net on the one hand, and adequate incentives for agricultural production are safeguarded on the other. 1/

The effectiveness of using consumption taxes to influence employment--as can be found in some developing economies--depends on the ease with which factors of production can move between sectors in response to changes in commodity prices. With capital markets often segmented in these economies, however, and capital rationed in the labor-intensive and informal sectors favored by the consumption taxes, 2/ it is doubtful whether such measures would have an appreciable impact on labor market outcomes. Moreover, discriminatory consumption taxation could lead to substantial distortions in resource allocation.

While statutory social security and payroll contribution rates are high in some of the developing economies in the sample, administrative difficulties have narrowed the bases of these taxes and restricted their revenue yield. For this reason, it seems more important for developing economies to focus on designing effective base-broadening measures to allow for a lowering of the tax rates, than for them to be concerned with the possibility of switching the tax burden from labor to consumption--a prominent issue in policy debates in many OECD countries. Measures to expand the coverage of payroll taxation to the informal sector, taking due account of administrative constraints, would go a significant way toward moderating the typically heavy tax burden on the formal sector.

Sectoral employment shifts are frequently an unavoidable consequence in developing economies undertaking structural adjustments, resulting in most cases in increased interim unemployment for workers in the formal sector. Hence, the level of income support provided by the authorities for the unemployed could be crucial in obtaining the required popular support for such adjustment efforts. While unemployment insurance is common in OECD countries, administrative constraints preclude its widespread use in developing economies. 3/ In some countries, the authorities have mandated severance payments to laid-off employees by formal sector employers. Such payments have an advantage over unemployment benefits in that they do not provide an incentive to unemployed workers to prolong the period of unemployment. However, the level and eligibility criteria of severance payments must be designed carefully so as not to provide a disincentive to hiring. In addition, as some developing economies are discovering, sectoral transfers of labor can be enhanced by the existence of a social security

1/ Reform of agricultural taxation will, in some cases, need to be complemented with increased provision of infrastructure, some form of land reform, credit market reforms, and the encouragement of small-scale methods, if it is to be successful in achieving these objectives.

2/ Capital rationing in developing economies is discussed in Chenery et al. (1974).

3/ See World Bank (1995).

system and targeted vocational training. Labor markets work better if the social costs of unemployment are both bearable and transparent. ^{1/}

3. Transition economies

a. Recent Fund advice

The thrust of Fund advice on tax policy in transition economies has been to develop market-oriented tax systems capable of contributing to fiscal consolidation in the short run, while laying the ground for market-driven economic growth in the long run. In the initial stages of the reform process, Fund staff encouraged the introduction of tax handles that had proven effective in market economies at a comparable stage of development. These generally included the introduction of consumption taxes such as the VAT, excises, and tariffs in line with international practice; they also encompassed the uniform taxation of profits of public and private enterprises, of foreign and domestic investors, and of different sources of personal income.

As reform progressed, the emphasis shifted to improving the revenue potential of the tax system, through measures that would improve tax neutrality and efficiency, in those countries where large budgetary imbalances compromised macroeconomic stability. Thus, in many instances, Fund staff have recommended streamlining exemptions and preferential treatments, narrowing rate ranges, and curtailing investment incentives. In particular, Fund staff have been critical of tax expenditures and subsidies as means to promote employment in most cases, although there were exceptions. These policy recommendations have been advanced on the grounds of both revenue and efficiency considerations. Occasionally, however, Fund staff have endorsed the temporary continuation of potentially distortionary taxes (e.g., the excess wage tax) or inequitable taxes (e.g., a schedular income tax) to address specific macroeconomic concerns (e.g., inflationary pressures and budgetary deficits), while advising the authorities on their detrimental long-term implications.

Fund policy advice in the area of unemployment benefits has been guided by the objective of building an effective social security system that can be financed within the overall fiscal constraints, while minimizing economic distortions, in particular those pertaining to the labor market. Fund staff have encouraged the authorities to introduce a system of unemployment benefits where it did not exist or had been precariously structured, and indicated the need to allocate adequate budgetary resources where they were deemed insufficient or to introduce earmarked payroll levies when necessary. While Fund staff have not, in general, explicitly recommended a reduction of overall unemployment-related expenditure, more effective targeting of this category of spending has been a common advice. Other Fund recommendations have included selected active labor market policies, such as training and public works.

^{1/} For a review of evidence, see IMF (1995a).

b. Prospective advice on policy options

Tax policy in most transition economies should be focused on revenue mobilization to meet macroeconomic objectives, while advancing the role of the market in effecting an efficient allocation of resources. In this context, the common objectives of generating employment and attracting domestic and foreign investment would be best served by enhancing the neutrality of the tax systems, and by broadening tax bases and ensuring uniformity in the treatment of taxpayers. Thus, the multiplication of tax incentives for job creation and investment promotion that are observed in many transition economies should be discouraged. These tax expenditures complicate tax administration and significantly erode revenue. There is increasing evidence that tax incentives have not been successful in attracting foreign investment or creating employment opportunities and, in fact, may have had a detrimental effect to the extent that they result in unpredictable and complex tax regimes and contribute to fiscal imbalances. ^{1/} Furthermore, attempts to design and apply ad hoc investment and work incentives inevitably hamper the development of market mechanisms by introducing distortions and provide opportunities for unproductive, rent-seeking activities.

As noted in Chapter III, the current tax burdens in many transition economies are already quite high. The mobilization of domestic savings and the development of the still incipient markets necessary in these transition economies to foster and sustain long-term economic growth may require the stabilization of, or even some decline in, the tax burdens in some countries. ^{2/} This implies that ongoing efforts in fiscal consolidation should be primarily focused on expenditure containment, together with improving tax administration, rather than on additional revenue generation through higher tax rates. A relative shift from income (including payroll) to consumption taxation may also prove beneficial for developing a favorable climate for employment growth over a longer horizon.

Prospective Fund advice on labor market-specific tax measures should focus on three issues. The first concerns social security and payroll taxes. Future tax reforms need to balance carefully the detrimental effects that these taxes might have on employment with budgetary considerations. Notwithstanding their administrative simplicity and low compliance costs, high tax rates on payroll could hamper the reabsorption by the emerging private sector of the labor shed by the ailing public sector, as well as distort labor markets by hindering the development of effective productivity-based wage incentives. Although revenue concerns and increasing demand for social insurance and assistance may prevent significant decreases in the statutory rates of these taxes in the short

^{1/} See OECD (1995e).

^{2/} For example, excessively high statutory tax rates tend to encourage tax evasion through informal sector activities, with deleterious effects on general tax compliance and on the development of modern market institutions and business practices.

run, improvements in the targeting of the social security system and the prospective resumption of economic growth may well permit a gradual reduction in rates in the future.

In other transition economies, the introduction and consolidation of a unified system of social security and payroll contributions would, however, allow for its portability and, therefore, bolster the development of more efficient labor markets by facilitating labor mobility across regions and industries while spreading the cost of such a system. In addition, the transfer of responsibilities for social expenditures from individual enterprises to specialized institutions funded primarily by payroll levies would be an important step in rationalizing the roles of the private and public sectors in a market environment.

The second issue concerns the taxation of excess wages. As mentioned earlier, excess wage taxes are usually intended as a complement to incomes policies to forestall wage-price spirals and as a means to strengthen corporate governance in SOEs. They have, however, both positive and detrimental effects on unemployment. On the positive side, to the extent that they succeed in enforcing economy-wide wage restraint, they contribute to macroeconomic stabilization and, hence, to an environment conducive to job creation. Also, by impeding excessive wage increases in SOEs, they may allow the emerging private sector to develop and compete with the public sector. This is particularly relevant in cases where the public sector offers extensive fringe and social benefits in addition to cash wages, which the emerging private sector cannot be expected to emulate.

On the negative side, to the extent that their tax base is a fraction of the wage bill, they share with payroll taxes most of the latter's detrimental effects on employment. Additionally, as excess wages are typically computed with reference to minimum wages that are usually adjusted upward overtime to compensate for inflation, these taxes help to establish an entrenched indexation mentality. They could also have a deleterious effect on industrial restructuring. In some countries, the tax has been identified as an incentive for labor hoarding by SOEs. ^{1/} Since in the long run, tax-based mechanisms of inducing wage moderation cannot replace the enforcement of hard budget constraints on SOEs and the introduction of effective monitoring and corporate governance over public enterprise management, transition economies should be encouraged, on balance, to reduce their reliance over time on excess wage taxes as a policy instrument to achieve either macroeconomic or labor market objectives. In any case, to

^{1/} From the viewpoint of the employee facing possible dismissal, remaining formally employed by the enterprise, even with little or no pay, may represent a better option than becoming formally unemployed. In most cases, state employment may entail entitlement to substantial social and fringe benefits and the possibility of returning to a regular position if the enterprise's difficulties are overcome. From the viewpoint of the employer, keeping part of the work force on furloughs or leave may lower the average wage and, hence, diminish tax liabilities under the excess wage tax.

minimize their detrimental effects, consideration should be given to limiting their applicability, even in the short run, to the SOE sector only.

The third issue concerns the scope of unemployment benefits and active labor market policies. Unemployment compensation replacement ratios and eligibility criteria should be tight enough to ensure that they allow an effective job search, mitigate between-jobs transitional costs and erosion of human capital, and do not delay or discourage re-employment. In the context of fiscal consolidation efforts, distorted relative wage structures, and rapidly changing real and nominal wages, a rigid link between the level of unemployment benefits and past individual earnings may not be either efficient or equitable. Thus, statutory benefits that decrease with the duration of unemployment coupled with a floor level of benefits, based on a properly updated poverty line or minimum wage, may protect against excessive hardship, marginalization, and obsolescence of existing human capital without discouraging reallocation of labor resources across economic activities or active job search. Unemployment compensation should also be limited to those who are part of the labor force; it should not be used as a substitute for other income-support or poverty-reducing policies, which may have different objectives and targeting criteria.

While the importance of active labor market policies in transition economies should not be overlooked, particularly in view of the need to reintegrate the long-term unemployed into the labor force, policies emphasizing the use of subsidies and tax expenditures--common in many transition economies--should be discouraged. 1/ These policies do not substantially differ from other existing production subsidies and could not be considered as constituting a sustainable basis for employment expansion. Furthermore, experiences in OECD countries with such policies tend to confirm the existence of significant deadweight costs and substitution effects: available estimates indicate that over half of those who find employment through job subsidy schemes would have obtained employment regardless of the subsidy program, and substitution effects in the form of displacement of previously employed workers have also been found to be significant. 2/

Nevertheless, some nontax-based active labor market policies could have beneficial effects on facilitating the vast redeployment of labor resources that may be needed in some transition economies as a result of their fundamental economic transformations. Policies that address imperfect information and possible mismatches between labor supply and demand--such as training and retraining programs--have been credited with positive results in this area. 3/ Care should be taken, however, to ensure that adequate

1/ See Boeri (1995).

2/ See OECD (1993) and Boeri (1995).

3/ It has also been pointed out that compulsory participation by unemployment beneficiaries in training programs may contribute to curb system abuse, since it prevents the simultaneous engagement in informal and other remunerated activities while receiving unemployment compensation.

delivery mechanisms for these policies, including the staffing of labor offices and other necessary administrations, are in place.

V. Concluding Remarks

Implementing appropriate measures to address the unemployment problem, or to expand gainful employment opportunities, is a prominent policy concern in developed, developing, and transition economies alike. This paper has focused on the ways tax policy can impinge upon labor market developments. It has discussed important conceptual linkages between taxation and unemployment, reviewed the available empirical evidence on this relationship, and surveyed the nature of actual country policies that have a bearing on alleviating unemployment. The paper has also reviewed recent Fund advice on tax and labor market policies provided to a broad sample of countries in the context of consultation and program missions, and, building on earlier discussions, identified possible prospective policy options.

The general conclusion to be drawn is that, while taxation is but one among many factors (under some circumstances it may arguably not even be a dominant factor) that can directly affect unemployment, it is an important determinant of market distortions in general, and labor market distortions in particular, with a consequent negative influence on the functioning of labor markets. Hence, the emphasis in policy should be placed less on formulating activist tax policies to reduce unemployment than on identifying those elements of a tax system that are most conducive for both minimizing distortions and fostering a favorable economic environment for growth and, therefore, for employment.

With respect to labor-market specific tax policies, appropriate measures to achieve these objectives include a spreading of the burden of employer payroll contributions to other tax bases, such as consumption (OECD countries), informal sector activities (developing economies), and emerging market sectors (transition economies). ^{1/} Tightening of eligibility conditions for unemployment benefits, while at the same time ensuring adequate targeted social support for the most vulnerable, would also be essential. Moreover, the effectiveness of these measures would be enhanced if complemented by policies to reduce structural rigidities in the labor market, in terms of both wage determination and labor mobility.

^{1/} The spreading of the payroll tax burden in many OECD countries takes on added significance when note is taken of the unfunded liabilities in these countries' social security systems.

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