



OECD Economics Department Working Papers No. 233

The Tax System in Mexico:
A Need for Strengthening
the Revenue-Raising
Capacity

Thomas Dalsgaard

<https://dx.doi.org/10.1787/713001800850>

Unclassified

ECO/WKP(2000)6



Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

OLIS : 02-Mar-2000
Dist. : 10-Mar-2000

PARIS

ECONOMICS DEPARTMENT

English text only

ECO/WKP(2000)6
Unclassified

**THE TAX SYSTEM IN MEXICO: A NEED FOR STRENGTHENING
THE REVENUE-RAISING CAPACITY**

ECONOMICS DEPARTMENT WORKING PAPERS NO. 233

by
Thomas Dalsgaard

Most Economics Department Working Papers beginning with No. 144 are now available through
OECD's Internet Web site at <http://www.oecd.org/eco/eco>.

88175

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English text only

ABSTRACT/RÉSUMÉ

The Mexican tax system encompasses a number of commendable features and disincentives to work, save and invest appear less severe than in most other OECD countries. However, the system also contains major deficiencies, which hampers the efficiency and equity of the system and contribute to the fact that Mexico has by far the lowest level of tax revenues in relation to GDP among the OECD countries. The main priorities for reform should be base broadening measures such as eliminating the tax preferences for agriculture, fisheries, publishing and land transportation; substantially reducing the vast number of zero-rated and exempted goods and services in the VAT system; and broadening the income base of individuals by taxing fringe benefits and eliminate the fiscal subsidy. Furthermore, increased taxation of property, in particular real estate, would be warranted from both a revenue-raising and distributional point of view. Finally, administration could be further improved through a more comprehensive registration of taxpayers; better training of local personnel; integration of social and tax registers; improved registration of cross-border trade; strengthened enforcement; and enhanced legal certainty for taxpayers.

JEL Code: H2

Keywords: Tax, Mexico

* * * *

Le système fiscal mexicain présente un certain nombre d'aspects positifs, et les contre-incitations à travailler, à épargner et à investir semblent moins fortes au Mexique que dans la plupart des autres pays de l'OCDE. Cependant, le système présente aussi de sérieux défauts qui nuisent à son efficacité et à son équité et contribuent à faire du Mexique le pays de l'OCDE ayant de loin les recettes fiscales les plus faibles en proportion du PIB. Les réformes devraient viser en priorité à élargir l'assiette des impôts en supprimant les régimes préférentiels dont bénéficient l'agriculture, la pêche, l'édition et les transports terrestres, en réduisant sensiblement le nombre de produits et services assujettis à un taux zéro de TVA ou exemptés de cette taxe, et en élargissant les revenus imposables des personnes physiques par l'inclusion dans ceux-ci des avantages accessoires et par la suppression de la subvention fiscale. En outre, une imposition plus lourde de la propriété, immobilière notamment, se justifierait à la fois pour accroître les recettes de l'État et dans une optique de redistribution. Enfin, l'administration de l'impôt pourrait être encore améliorée grâce à un recensement plus complet des contribuables, à une meilleure formation du personnel local, à une intégration des fichiers des services sociaux et fiscaux, à une meilleure prise en compte du commerce frontalier, à une application plus efficace de la législation et à l'élimination d'un certain nombre d'incertitudes juridiques pour les contribuables.

Classification JEL : H2

Mots-clés : Impôt, Mexique

Copyright OECD, 2000

**Applications for permission to reproduce or translate all, or part of, this material should be made to:
Heads of Publications Service, OECD, 2 rue André Pascal, 75775 Paris Cedex 16, France**

Table Of Contents

| | | <i>Page</i> |
|------|--|-------------|
| I. | Introduction | 4 |
| II. | The economic and social context influencing the design of the tax system..... | 4 |
| III. | Broad features of the Mexican tax system | 7 |
| IV. | Main issues for strengthening the tax system..... | 13 |
| V. | Conclusion and options for further reform..... | 25 |
| | Tables and Figures..... | 28 |
| | Annex I: Summary of tax reform measures, 1987-98 | 50 |
| | Annex II: Main issues in the tax mix discussion in OECD countries in the 1990s | 54 |
| | Annex III: The statutory tax regime, 1998 | 57 |
| | Bibliography | 76 |

THE TAX SYSTEM IN MEXICO: A NEED FOR STRENGTHENING THE REVENUE RAISING CAPACITY

Thomas Dalsgaard¹

I. Introduction

1. The Mexican tax system encompasses a number of commendable features, and disincentives to work, save and invest appear less severe than in most other OECD countries. However, it still contains major deficiencies, which contribute to the fact that Mexico has by far the lowest level of tax revenues in relation to GDP among the OECD countries. As expenditures are also relatively low the budget outcomes are in general reasonably satisfactory -- but the low capacity for raising tax revenue severely limits the scope for public spending, including in areas where potential social returns are high. The experience of other countries also suggests that there is considerable scope for strengthening the potential revenue raising capacity of the Mexican tax system despite the wide distribution and low level of income. A number of countries, including Turkey and several Latin American countries, which have similar or even lower incomes per capita than Mexico, thus manage to raise substantially higher tax revenues in relation to GDP (Figure 1). Furthermore, as much as 30-40 per cent of government revenues in Mexico stem from oil taxes, mainly in terms of royalty payments from the state-owned oil company PEMEX, underlining the modest amount of revenue collected from non-oil sources.²

(Figure 1. Tax revenues and the level of income, 1996)

II. The economic and social context influencing the design of the tax system

2. The Mexican tax system has to be evaluated against a number of economic and social features that distinguish Mexico from most other OECD countries. First, the relatively low level of government expenditure in Mexico (Figure 2) is mainly a reflection of the low tax revenues and the need for prudent budget outcomes. However, more public spending to enhance capacity and investment in areas like education, health, physical infrastructure and poverty alleviation, which are key to further economic and social development of the country, would clearly be desirable, provided it is well-designed and effectively implemented.³ In addition, the social security reform and the cost associated with the banking sector

1. The author is a staff economist at the OECD. This paper is a revised version of a special chapter that was originally produced for the OECD *Economic Survey of Mexico* published in April 1999 under the authority of the Economic and Development Review Committee. The author is indebted to Benedicte Larre, Paul Atkinson, Kathryn Gordon, Val Koromzay, Marcos Bonturi and Flip de Kam for comments and drafting suggestions, and to the Mexican authorities for their assistance with obtaining the information and clarifications necessary to prepare the paper. The paper has also benefited from discussions with numerous Mexican experts outside the government. Special thanks go to Chantal Nicq, Benedicte Riey and Harry Tchilinguirian for technical assistance and to Nanette Mellage for secretarial assistance.

2. It should be emphasised that this paper is mainly concerned with the tax system excluding revenues from PEMEX, and that issues relating to the extraction of rent from the state monopoly are not analysed. Moreover, the paper generally treats social security contributions as taxes on labour even though these are not included in the tax laws and to some extent could be regarded as insurance. The *Economic Survey of Mexico*, 1998, gives a detailed exposition of the health insurance and pension components of the social security system.

3. Some of these issues have been discussed in special chapters of previous *Economic Surveys of Mexico* (1995, 1997, and 1998).

support package (FOBAPROA) are expected to raise annual government expenditure by more than 2 per cent of GDP over the next 10 years.⁴ Financing these expenditures will require increases in the tax base, given the need to limit government borrowing.⁵ Some theoretical and empirical analyses suggest that higher tax levels could be counterproductive in terms of their effect on economic growth, whereas other recent studies raise serious doubts about the robustness of this proposition (Box 1). When taking into account the way additional revenues are spent as well as the initial tax levels, growth effects from increased taxation might even be positive – in particular for a low tax country like Mexico. Furthermore, the structure of the tax system may be more decisive than the overall level of the tax burden in determining the balance between economic and social returns from more expenditure and the costs of higher taxation. However, it is important to stress that any move to raise tax revenues will be sustainable only to the extent that the population at large perceives it is getting sufficient value for money in terms of the quality of public spending.

(Figure 2. General government expenditure -- average 1990-1996)

Box 1. Taxation and economic growth

The direction of tax effects on the level and growth of income is not always clear. Taxation may, in fact, be beneficial for the economy if it provides the financial basis for the provision of public goods that improve average living standards and social welfare. More and better public goods and services may also increase the productivity of private fixed and human capital and hence increase economic growth. This is in particular true in countries with underdeveloped human and physical capital. In addition, government transfers may reduce poverty and improve social cohesion. On the other hand, higher taxes increase distortions and may reduce saving, investment and work incentives. The adverse effects on economic efficiency may grow disproportionately with the increase in the tax level. As the net effect of taxation on economic performance depends on the level and structure of taxation, and whether tax revenue is spent in a productive or unproductive way, the benefits and costs of taxation are difficult to disentangle empirically. The Secretariat has previously examined the relationship between taxation and growth for a sample of OECD countries (not including Mexico, Turkey and other relatively low-income countries) and found that a 10 percentage point increase in the tax/GDP-ratio is accompanied by 0.5 percentage point lower growth (Leibfritz *et al.*, 1997). This is more or less in line (at least, in qualitative terms) with the findings of Barro (1991), Plosser (1992) and King and Rebelo (1990). However, the robustness of the negative relationship between taxation and growth has been questioned by several other studies, including: Levine and Renelt (1992); Slemrod (1995); Easterly and Rebelo (1993); Mendoza *et al.* (1997); Hendricks (1999); Engen and Skinner (1996); and Milesi-Feretti and Roubini (1998), who generally find non-significant or even positive correlation. In particular, there may be non-linearities implying a positive growth effect if taxes are increased from a low level and a negative growth effect if they are increased from a high level.

3. Second, the dependency on oil-related revenues in government budgets implies that volatility in oil prices -- besides imposing volatility on the real economy -- significantly influences fiscal policy due to the strict adherence to announced budget targets. The consequence is that discretionary fiscal policy decisions tend to exacerbate the effects of oil price changes on the economy. For instance, three discretionary spending cuts were made during 1998 following the sharp drop in oil prices, allowing the deficit target of 1.25 per cent of GDP to be roughly achieved. If more revenues could be raised from non-oil sources, and at least some of it being used to improve the average budget position, this would allow the government to absorb a larger part of the oil price changes, thereby reducing the frequency of

4. See Chapter II of the *Economic Survey of Mexico*, 1999.

5. Moreover, as the major privatisation operations have been completed earlier in the 1990s, there is no longer much potential to raise revenues from this source.

disruptive discretionary changes to expenditure and/or taxes.⁶ This is also a pertinent concern in more general terms. Mexico has shared the experience of many Latin American countries where fiscal policy has been pro-cyclical more often than not -- and this has contributed to the considerable overall macroeconomic volatility of the Mexican economy. The variation in the growth rates of real GDP and real private consumption has thus exceeded the OECD average by a factor of three and five, respectively, since 1980. Another macroeconomic factor shaping the design of the tax system has been a history of high and volatile rates of inflation that Mexico shares with most other Latin American countries.

4. Third, income is considerably lower and much more unequally distributed in Mexico than in the other OECD countries, except for Turkey. When measured by the Gini coefficient, post-tax income inequality in Mexico is only slightly lower than in Brazil and Chile. One illustration is that the most affluent 10 per cent of households receive nearly 40 per cent of total income, while less than 10 per cent of total income is earned by the 30 per cent of households with the lowest income levels.⁷ Moreover, distribution has become slightly more unequal over the past 10 to 15 years according to household surveys. The low level and wide distribution of income give rise to economic and social problems, not least in terms of poverty (including malnutrition, high infant mortality, illiteracy and lack of basic health care) that are virtually absent in most other OECD countries. Furthermore, the wide income distribution in practice limits the base for individual income taxes to a relatively small group of people, who then face rather high tax payments in absolute terms. As the most affluent individuals typically have access to instruments of avoidance or evasion, this acts to limit the scope for raising revenues through direct taxation of incomes.

5. Fourth, the informal sector in Mexico is large compared with other OECD countries, except perhaps for Turkey, although it does not appear to be out of line with that of other Latin American countries (Table 1). By several estimates, employment in the informal sector could be as much as one-third to one-half of total urban employment,⁸ but since incomes are relatively low in the informal sector (as compared with the formal sector) its share in GDP is probably somewhat lower. Precise estimates are inherently difficult to obtain, but a recent study by the Ministry of Finance, based on micro-data from the INEGI household survey, estimated the size of the informal sector to be around 10 per cent of GDP.⁹ The informal sector in Mexico is primarily a by-product of widespread poverty, lack of basic skills of a large proportion of the population and absence of a social safety net and is thus not comparable with the "undeclared" economy of more advanced economies (Box 2). It is a characteristic feature of the informal sector that it expands in economic downturns because it provides the only fall-back option for people being laid off in the formal sector. Integration of the informal economy is thus a complex issue that goes well beyond tighter administration and control and even beyond tax structure. From a taxation point of view, most activities in the informal sector are of a subsistence nature and would thus potentially represent a very limited, or even negative, income tax base in the short to medium term (as a result of the negative income

6. Since 1980 the standard deviation from PEMEX royalties has been 1 per cent of GDP, *i.e.* if normality is assumed then the movement from one year to another will not exceed 2 per cent of GDP with 95 per cent confidence. A rough rule of thumb could then be, that tax revenues, excluding PEMEX contributions, should be large enough to accommodate a 2 per cent of GDP drop in PEMEX contributions without causing the budget deficit to exceed a targeted maximum and without having to resort to discretionary expenditure cuts.

7. Figures based on the 1996 Household Income and Expenditure Survey (INEGI).

8. In the OECD 1997 *Economic Survey of Mexico*, references are given to studies that estimate informal employment to be 20-44 per cent of the urban labour force -- a share which according to most of the indicators used have been increasing since the 1980s.

9. Other studies have estimated the size of the informal sector through electricity consumption or money demand, and have generally found that the informal sector could be as much as one-third of GDP. These studies, however, do not only capture informal activity, but also tax evasion by the formal sector, which may be a different issue for policy.

tax for workers earning less than 3.2 times the minimum wage). However, the informal sector also facilitates evasion by higher income individuals and larger corporations, thus contributing to erosion of the formal sector tax base. It is thus important to institute mechanisms whereby these activities can be included in the tax base so as to mitigate problems of horizontal inequity, non-neutrality between economic activities and a sense of unfairness among taxpayers. Nevertheless, this challenge should not divert attention from more urgent problems related to the income and value added tax systems.

(Table 1. Estimates of informal sector size in selected countries)

Box 2. The informal sector

The informal sector in Mexico covers a very diverse and heterogeneous set of economic activities, individuals and enterprises, and is thus a much wider concept than the limited “grey sector” in more advanced OECD economies. Although most of agricultural workers in Mexico operate without any formal contract, informality as such is often associated with non-agricultural activities and is thus seen as having emerged with urbanisation. It is particularly widespread in domestic services, retail trade and cleaning services. Operating on a very small scale, informal units very often have no accounts and premises, produce or sell low-quality/low-cost products and services, rarely comply with either various registration obligations or labour regulations, and are generally short-lived. They also tend to rely on family ties for labour contracting. However, part of the informal sector operates on a larger scale and it is, for instance, not uncommon for firms registered in the formal sector to supply part of their production into the untaxed informal sector. It also appears that street vendors and other retailers in the informal sector, at least to some extent, are supplied by non-registered and non-taxed imports and sometimes also stolen goods. Unfortunately, reliable quantitative estimates of these problems are not available. See also the *Economic Survey of Mexico* (1997).

III. Broad features of the Mexican tax system¹⁰

6. The Mexican tax system has undergone a number of major reforms since 1980. Primary features of these reforms have been the introduction of a general value-added tax (VAT); indexation to neutralise the effects of inflation on taxation; and integration of personal and corporate income taxes to ensure more neutrality with respect to the financing decisions of companies. Since the late 1980s, the reforms have had two main objectives: first, to compensate the fall in revenue caused by the collapse in oil prices in 1986; second, to reduce distortions and inefficiencies, including the incentives to switch between different kinds of income and between tax systems of different countries. In particular, in line with the gradual opening of the economy which ultimately led up to the NAFTA (1994), there has been some convergence of corporate and individual top income tax rates with those of the United States and Canada. The reforms of the tax system (which are summarised in Annex I) made the system more equitable and efficient: marginal income-tax rates were lowered for corporations and individuals, and the tax base widened in line with the principles guiding tax reforms in several other OECD and Latin American countries.¹¹ Despite the improvements in the tax structure, the reform measures did not produce any lasting and significant increase

10. Background information for this section is presented in the annexes: I. Summary of tax reform measures, 1987-98; II. Main issues in the tax mix discussion in OECD countries in the 1990s; and III. The statutory tax regime, 1998.

11. Annex II sets the Mexican reforms in a broader context by summarising some overall principles for taxation as well as some of the main themes of tax discussions in OECD countries since the 1980s. For a discussion of developments in Latin American countries, see Shome, 1992.

in tax revenues (Figure 3).¹² The main reasons for this have been the continuation, extension or introduction of preferential regimes, various types of tax relieves, and -- closely interlinked -- the fact that reforms were apparently not successful in ensuring stronger compliance with the tax law.

(Figure 3. Total tax revenues)

7. Mexico's tax-to-GDP ratio of around 15 per cent is by far the lowest among OECD countries, although it should be noted that such ratios may not be fully comparable between countries.¹³ Mexico, for instance, uses tax credits instead of social transfers to compensate low-income wage earners in the formal sector implying -- all else being equal -- lower levels of taxes and expenditure than in countries using transfers as compensation (although this effect should not be overstated as it amounts to less than half a percentage point of GDP). However, it is striking that Mexico collects nearly 10 percentage points of GDP less than Turkey, which at 25 per cent of GDP has the second-lowest ratio in the OECD area. Excluding royalty payments from PEMEX, the gap is even larger. Furthermore, there are few signs that Mexico is catching up -- on the contrary, revenues as a percentage of GDP have fallen in recent years and the difference between Mexico and the rest of the OECD has increased slightly since 1980. Compared with other Latin American countries, Mexico's tax revenues (excluding PEMEX royalties) as a percentage of GDP lag behind those of Argentina, Chile and in particular Brazil.

8. All major sub-components of total tax revenues, excluding PEMEX royalties,¹⁴ displayed a slowly increasing trend as a per cent of GDP from the early 1980s until 1994 (Figure 4). Then, the economic crisis in 1995 triggered a sharp decline in revenues from income taxes, social security contributions and other consumption taxes. VAT revenues remained almost unchanged as the rise in the standard VAT rate from 10 to 15 per cent that year offset the impact from the sharp drop in real private consumption and real imports. Any comparison of the mix of collected tax revenues with that in other OECD countries must be made cautiously, given the special features of the Mexican economy which have affected the collected tax mix. These include the low and unevenly distributed income, the importance of oil as a revenue source, the informal sector, as well as the severe economic crises of the past two decades. Given this caveat, the tax mix (excluding PEMEX royalties) has in many respects followed trends in many other OECD countries. There has been increasing reliance on social security contributions and general sales taxes, whereas import duties have become less important -- in part, due to the trade liberalisation that started in 1986-87 and culminated with NAFTA.¹⁵ Significant variations exist in the tax mix across OECD countries, but Mexico's current tax structure, excluding PEMEX, does not stand out as unusual (Figure 5).

(Figure 4. Tax mix in Mexico, 1980-1996)

-
12. Taxes include federal, state and local taxes, social security contributions and royalty payments from PEMEX (the latter being classified as a tax in OECD's revenue statistics). In the public sector accounts of the Ministry of Finance (*Hacienda*) the contributions from PEMEX to the federal government budget are treated as non-tax revenues.
13. Countries generally apply widely different practices when compensating individuals, households or corporations through the tax and transfer system, which in turn implies different levels of expenditure and taxes even where the economic impacts are similar. Some rely primarily on expenditure, while others use tax allowances and/or credits more extensively. Moreover, some countries tax gross income, including social transfers, whereas others only tax income net of transfers. Finally, countries may enact policies, for instance regulation, that have similar goals and create similar economic incentives and disincentives as taxes and spending, but have different implication for the size of the government sector as measured by taxes or spending (Leibfritz *et al*, 1997).
14. The structure and size of revenues from PEMEX are described in more detail in Box 3.
15. Revenues from customs and import duties declined from a peak of 1.2 per cent of GDP in 1992 to 0.6 per cent in 1998 as tariffs were reduced.

(Figure 5. Tax mix in selected countries, 1996)**Box 3. PEMEX and subsidiaries' contributions to the federal government budget**

PEMEX and its subsidiaries effectively contribute to the federal government budget through four channels:

- a hydrocarbons fee of 60.8 per cent of gross revenues (excluding VAT);
- ordinary VAT payments and customs duties;
- an "excess profit fee" on windfall gains from oil exports (for 1998, the levy was programmed to be 39.2 per cent of the excess of oil prices above US\$ 15.5 per barrel);

According to Article 4 of the Federal Revenues Law for 1998, the hydrocarbons fee paid by PEMEX is formally made up of contributions from three different sources: an oil extraction royalty (which comprises an ordinary fee, an extraordinary fee and an additional fee), the regular income tax of 34 per cent and excise taxes (special tax on products and services, IEPS). As changes in excises are determined endogenously by the market price of oil and the regulated price at the pumps, the oil extraction fees act as a residual to ensure that the aggregated contribution from PEMEX is equivalent to the budgeted 60.8 per cent of gross revenues.

The oil extraction royalty paid by PEMEX has fluctuated sharply since 1980, *cf.* Figure 3 above, contributing between 10 and 30 per cent of total federal revenues. In most recent years, *i.e.* 1993-98, the contribution has varied between 10 and 25 per cent of total revenue (2-4.5 per cent of GDP). Including the special gasoline tax, payments from PEMEX have been more stable, contributing annually 25-30 per cent of total revenue (4-5 per cent of GDP) during 1993-97. Net VAT payments from PEMEX have amounted to 0.3-0.6 per cent of GDP during the same period.

9. Cross-country comparison of the share of income taxation from, respectively, individuals and corporations is blurred by diverging accounting practices. In particular, Mexico includes in corporate taxes payments from self-employed as well as some withholding taxes (*e.g.* on payments to foreign residents and on interest income from bank deposits), which are allocated to individual income taxes in most other countries. This implies a tendency to report a higher share of corporate taxation in Mexico than elsewhere. Indeed, on a comparable basis the share of income taxes from corporations may be roughly on level with, or even below the OECD average.¹⁶ Another salient feature is that the share of capital income in GDP is much higher in Mexico than in most other OECD countries, implying that the effective taxation of capital is very low (see below). The reported revenue share from individual income taxation and payroll taxes is below the average OECD share, but similar to that of Greece, Turkey and Brazil. However, this result is also affected by the differences in definitions.

10. Leaving aside preferential regimes in corporate and individual income taxation as well as in the VAT system, the statutory rates and features of the general tax regime in Mexico compare favourably with those of most other OECD countries. The integration of personal and corporate income taxes implies equal treatment of corporate financing through issuing equity or using retained earnings, while indexation to inflation ensures that tax distortions from high and volatile inflation rates are kept to a minimum (Box 4). The top marginal statutory tax rate on individual wage-income is among the lowest in OECD. The marginal corporate tax rate is close to the median of OECD-countries, but significantly higher than in some

16. Unfortunately, the statistics do not allow a full correction of the Mexican data for these idiosyncratic features. Revenues from withholding taxes amounts to some 0.7 per cent of GDP (1997) or around one-quarter of total corporate tax revenue, but information on tax revenues from self-employment is not available.

Latin American countries, including Brazil and Chile. The special asset tax on the net worth of enterprises serves as an important control device without creating any significant disincentive for investment.

Box 4. Indexation to inflation

High inflation has several potentially adverse consequences for non-indexed tax systems: bracket creep (although it raises revenue, it is normally considered a non-transparent and not necessarily efficient way to finance government expenditure); high taxation of investment when depreciation rules do not take into account the effects from inflation (which gives incentives to invest in assets with low duration); distortion of saving and investment decisions when only nominal interest payments are taxed or deductible; overvaluation of capital gains which could lead to “lock-in effects” and thereby lower investment; and eroded revenues from specific excises. Moreover, high inflation is often accompanied by high volatility, which adds to tax uncertainties and an inefficient resource allocation if the system is not indexed. These costs of non-indexation have to be weighed against the administrative difficulties and complexities of introducing accounting for inflation, which is why many low-inflation OECD countries choose not to index their tax systems.

For Mexico, the semi-annual adjustment of brackets, subsidies and credits in the individual income-tax system effectively limits bracket creep. The full indexation of assets and liabilities ensures that only real interest income is included in taxable income and indexation of realised and accrued foreign exchange gains and losses render the tax system neutral regarding expatriation or repatriation of capital. Purchases of goods and services by corporations are immediately expensed so as to eliminate any effect of inflation on the calculation of taxable income arising from the treatment of inventories.

11. The progressivity of the individual income tax system is ensured by the tax schedule itself, as well as by the progressive salary tax credit and the so-called tax subsidy. The various tax reliefs pull in the other direction. The tax credit, which is refunded in cash for low-wage earners with negative tax payments, was introduced in 1994 (with retrospective effect from October 1993) and extended in 1995 to alleviate adverse distributional consequences of the VAT increase from 10 to 15 per cent.¹⁷ Unlike the system in some other countries, for instance Canada, the tax credit is independent of family status and number of children, which tends to lessen its impact on progressivity as low-income families typically have more children. The tax subsidy has been implemented to mitigate problems of horizontal inequality imposed by the non-taxation of fringe benefits.¹⁸ Combining the statutory rates, the tax credit and the tax subsidy gives the theoretical effective tax rate for each income category of wage earners in the formal sector (*i.e.* taxes expected to be paid under full compliance with the tax law). The tax system is progressive throughout all income categories (Table 2). Progressivity is highest at the lower-income intervals, whereas the rate structure flattens somewhat after ten times the minimum wage as the top marginal effective rate rises to just below 25 per cent. The theoretical effective tax rates points to another salient feature of the system, *i.e.* that the revenue-generating base of the system is extremely narrow. Indeed, by December 1997, formal sector employees with earnings less than 3.2 times the minimum wage¹⁹ -- amounting to some 70 per cent of all dependent employees -- would in theory be paying negative income taxes, *i.e.* they would receive

17. However, as a large proportion of consumption by the lower income deciles are zero-rated goods and services, the VAT increase would not have had a full impact on the living standards for these groups.

18. The subsidy is creditable against tax and varies inversely with the proportion that fringe benefits represent in total earnings. The subsidy decreases with rising income thus adding to progressivity of the overall tax system. According to official estimates, fringe benefits amount to one-third of total remuneration for employees. Fringe benefits are only deductible for the firm if they are extended to all employees, and for wage-earners with incomes above seven minimum wages they are only exempt up to the amount of one minimum wage.

19. The minimum wage is around 28 pesos per day (December 1998) or less than US\$ 3.

cash payments from the tax authorities. It should be noted, however, that the theoretical rates does not reflect actual amounts paid in tax by different income groups and that they do not apply to self-employed and individuals working in the informal sector. Tax avoidance and evasion erode the revenue-generating capacity of the system and actual progressivity may differ from the theoretical in a non-negligible way.

(Table 2. Tax progressivity and distribution of wage earners)

12. Measured by statutory marginal tax wedges, distortions in the labour market are generally lower in Mexico than in most other OECD countries, including the United States and Canada, for most family types (Figure 6). Of the selected countries shown, only New Zealand and Turkey generally apply lower marginal tax wedges than Mexico.²⁰ Higher marginal rates affect both labour supply and demand by raising the wedge between what workers receive from pay increases and what firms pay, and empirical analysis suggests that employment falls as a result, thereby lowering potential output. The extent of the fall in employment depends on labour-market institutions and the wage-bargaining framework. In countries with flexible real wages, such as Mexico, taxes tend to get shifted back onto labour, reducing the take-home wage, while leaving labour demand relatively unaffected. Labour-supply elasticities, however, could be somewhat higher in Mexico than in most other OECD countries, at least with respect to wage earners with incomes above three times the minimum wage, *i.e.* those paying positive taxes, and self-employed, for whom informal sector employment appears to be a close substitute to the formal sector.²¹

(Figure 6. Marginal tax wedges by family type and wage level, 1996)

13. Incentives to save and invest do not appear highly distorted in Mexico compared with most other OECD countries. In particular, when measured by statutory marginal effective tax rates on investment in various physical assets and different sources of financing, Mexico stands out among the group of OECD countries as having one of the most neutral tax systems.²² The required pre-tax rates of return of different investments, taking into account both corporate and personal taxation, are thus relatively uniform across various assets and financing sources (Table 3). The relative neutrality reflects mainly the integration of individual and corporate taxation²³ and the indexation to inflation. As a summary measure of neutrality, the standard deviation of these returns (amounting to 0.3) is lower in Mexico than elsewhere in the OECD, except for New Zealand.²⁴ Moreover, the required level of pre-tax returns of each instrument in Mexico is not far from the OECD average, indicating that no excessive tax disincentives exist for each of these

20. Among the entire group of OECD countries, Japan and Korea also (in general) apply lower marginal wedges than Mexico.

21. Empirical work (Leibfritz *et al*, 1997) shows that labour-demand elasticities are generally much higher than overall supply elasticities (where substitution and income effects move in opposite directions), so that labour taxes tend to be much more distortionary in countries where there are rigid real wages, and most of the tax effect falls on the demand rather than the supply of labour. Unfortunately, there exists no empirical work investigating this issue for Mexico.

22. The marginal effective tax rates are reflected in the required pre-tax rate of return an investment has to earn in order to provide a personal investor with the same post-tax return as a bank deposit earning a pre-tax 5 per cent real rate of interest. The estimates are based on the King-Fullerton methodology. The methodology has a number of shortcomings, including the absence of uncertainty and the rudimentary treatment of financial structures and of the intermediation process. For a thorough exposition see Gordon and Tchilinguirian, 1998.

23. In particular, it is noted how the full imputation system implies equal marginal effective rates on retained earnings and new equity.

24. The changes to corporate taxation made in 1999 have introduced a wedge between distributed and retained profit (see Box 9), creating a bias in favour of financing through retained earnings.

investments and financing sources. Income from private savings are receiving favoured treatment in terms of a tax rate of only 17-20 per cent for all levels of income, and only on the first 10 percentage points of nominal interest rates. Some non-neutrality across savings instruments is imposed by the tax exemption on interest income from various financial instruments, including government securities and instruments with maturity exceeding one year, as well as the tax deductibility of pension savings up to a certain limit.

(Table 3. Required real pre-tax rates of return, 1996)

14. Actual average tax rates collected on consumption, labour income and capital income are somewhat lower in Mexico than in most other OECD countries (Figure 7). The taxation of capital income is particularly low, but in general the numbers show that the low overall tax revenue to GDP ratio for Mexico reflects relatively low actual tax payments on all three bases. The advantage of using actual average rates, as opposed to statutory rates, is that they capture effects from preferential regimes and other tax-reliefs as well as overall compliance, which are not reflected in the effective statutory rates. The levels of actual average rates are not adequate for comparing overall tax distortions across countries, however, since low rates may primarily reflect preferential treatment of selected groups of taxpayers and high taxation of others. Moreover, average levels of taxation are not necessarily good approximations of the distortions created by the tax system, which are primarily determined by marginal rates facing the individual taxpayer. Finally, besides the methodological problems discussed in Box 5, a major factor which

(Figure 7. Average effective tax rates)

Box 5. Measuring effective tax rates

The estimates for effective tax rates on capital income, labour income and consumption are based on a modified version of the Mendoza *et al.* Methodology (see Mendoza *et al.*, 1994). The three tax rates are measured as *ad valorem* estimates by classifying virtually all forms of tax revenue at the general government level into one of the three taxes. Each measure of tax revenue is then expressed as a fraction of the corresponding tax base, *i.e.* consumption, wages and the overall operating surplus in the economy. The methodology gives rise to a number of caveats in terms of the assumptions being made and the data being used (see OECD (2000) and Carey and Tchilinguirian, forthcoming). First, all sources of household income are assumed to be taxed at the same rate (the estimates turn out to be quite sensitive to changes in this assumption, for instance if Mexican households are assumed to pay zero tax on capital income, it raises the effective tax on labour by 1 to 1.5 percentage points and lowers that on capital by the same amount). A second pertinent issue is whether to apply gross or net operating surplus (*i.e.* operating surplus *less* capital consumption) in the base for capital taxation. In theory, the net operating surplus should be used, but problems of measuring capital consumption sufficiently accurately in the national accounts could favour using the gross concept in some circumstances. Here, however, the net operating surplus is used in the base, implying that effective tax rates on capital are very high, and probably overestimated, for some countries. Third, the numbers are not taking into account tax bases not measured by the national accounts -- such as imputed rental income from owner-occupied housing, work at home, etc. A particular problem is the informal sector or "non-declared" economy. Income in this sector is to some extent covered by national accounts data, and is therefore included in the income bases used in the calculations, but it does not generate income tax revenues. This implies that actual tax rates on formal sector income are to some extent underestimated depending on the size of the undeclared economy and how much of this activity is included in official GDP figures. The methodology used here explicitly treats imputed wages to the self-employed as labour income, whereas the Mendoza *et al.* methodology attributes the entire operating surplus of unincorporated enterprise to capital. The estimates use revenue data collected by the OECD and national accounts data. Due to incomplete national accounts data for Mexico, assumptions have been made from the 1994 Household Survey, with respect to self-employment income and household property income.

complicates the analysis of tax effects is determining who finally bears the incidence of the tax -- since taxes levied on a given base may end up being shifted along the production and distribution chain.²⁵

IV. Main issues for strengthening the tax system

15. The structure of the general Mexican tax system in terms of statutory rates and features appears satisfactory overall, but the system does not seem to be robust enough to meet prospective financing needs and there are a number of areas where improvements would contribute to both better equity and efficiency. The key challenge facing the tax system is to increase the potential revenue raising capacity, primarily by broadening the base and improving collection, while keeping the rates near the current low levels. This would strengthen revenue significantly without increasing distortions much, and at the same time it would alleviate problems of horizontal inequity and help reducing budget volatility. The main concerns are the preferential regimes and the closely related deficiencies in tax administration. The preferential regimes, besides diluting revenue and complicating administration *per se*, create significant loopholes and facilitate evasion. This, in turn, hampers the effectiveness of the tax administration and creates major problems of horizontal inequity (some pay taxes, others do not). On the other hand, inefficiencies in the tax administration itself may compound negative revenue consequences arising from preferential regimes to the extent that inadequate surveillance and enforcement induces taxpayers to falsely register their activity or transactions in these regimes. Lack of administrative capacity at the sub-national level could also be a major impediment for decentralising more expenditure responsibilities and taxing powers to states and municipalities. Finally, considerations related to the informal sector, income distribution and the impact from oil price volatility on the budget are also relevant with respect to reforming the tax system.

Broadening the base: preferential regimes and the informal sector

16. Preferential regimes (or tax expenditures in a broad sense) are major contributors to the low level of revenues. Not only do they lead to low revenues *per se*, they also open multiple possibilities for non-compliance through tax evasion and avoidance. Moreover, preferential regimes may introduce considerable non-neutralities in terms of incentives to various economic activities. The exemptions and zero-rated goods and services in the VAT system, as described in Annex III, have resulted in a significant reduction of the base of taxed consumption²⁶ and also contributed to low VAT compliance, as some transactions are falsely attributed to the zero-rated base. Moreover, the system of refundable VAT credits exacerbates the incentives to fraud and complicates administration further.²⁷ According to the authorities' estimates, VAT compliance in Mexico is only around 63 per cent -- *i.e.* only 63 pesos were collected out of every 100 pesos that should have been collected (Table 4). This is below compliance levels in other OECD countries for which comparable data are available, including Canada and Portugal, as well as some Latin American countries. The narrow base and the induced low compliance implies that Mexico ranks lowest among the OECD countries in terms of VAT productivity.²⁸ This is also the case for the effective VAT

25. Producers may be able to shift taxes on to consumers (via higher prices), depending on product market conditions, or onto labour (via lower wage cost, including through reducing employment), depending on labour-market conditions. Labour, on the other side, may also be able to shift taxes on wages and salaries to producers if labour market conditions allow after-tax wages to be held unchanged.

26. By some estimates only around one half of total consumption is taxed.

27. In 1997, the cash refunds amounted to 1.1 per cent of GDP, up from 0.7 per cent of GDP in 1994 and 0.3 per cent of GDP in 1993.

28. The VAT productivity is a standard measurement of the revenues collected per percentage point tax, *i.e.* VAT revenues in per cent of GDP divided by the standard VAT rate. Although a relatively rough indicator it provides some guidance for international comparison.

rate²⁹ in per cent of standard rate -- again indicating that only a small part of the potential base is actually being taxed.

(Table 4. Indicators of VAT compliance and productivity)

17. Preferential treatment in the corporate income scheme concerns primarily the simplified regime for certain sectors and the small taxpayers regime. In addition, until the 1999-tax package tightened consolidation rules and eliminated the immediate deduction scheme for specific kinds of investment, these two features represented important preferential regimes and correspondingly significant tax losses.³⁰ The sectors benefiting from the *simplified regime* -- *i.e.* agriculture, fisheries and land transportation, which together represent around 10 per cent of GDP and 25 per cent of total employment -- pay only little or no corporate income tax, as taxation is based on cash flows, and only on resources withdrawn from the enterprise. These sectors are thus *de facto* liable to the assets tax only.³¹ A large part of taxpayers in these sectors are small family-run businesses that would be lightly taxed in any circumstance (under the regime for small taxpayers), but also larger corporations are avoiding income taxation under the simplified regime. There seems to be little economic justification for the special treatment of medium- and large-sized corporations in agriculture and land transportation. The *regime for small taxpayers*, on the other hand, serves the useful purpose of making formal sector economic activity more accessible -- in terms of less complicated rules and requirements -- for self-employed and micro-businesses who would otherwise have an incentive to operate in the informal sector.

18. Finally, the non-taxation of fringe benefits in the individual income-tax system leaves around one-third to one-fourth of total labour income in the formal sector untaxed. Moreover, the non-taxation has necessitated the introduction of a tax rebate -- the fiscal subsidy -- for those receiving a relatively small share of remuneration as fringe benefits, in order to mitigate adverse consequences for horizontal equity. This, in turn, means that tax revenues and the base of taxpayers are lowered further and adds to the complexity of the tax system. Fringe benefits are included in the income-tax system in most OECD countries,³² but the tax treatment of different types of fringe benefits varies significantly across countries. Only New Zealand and Australia have separate fringe benefit taxes.

19. In sum, Mexico applies preferential regimes on a broad range of economic activities and incomes -- a practice which causes a major drag on tax revenues, uneven incentives across activities and severely

29. VAT revenue divided by total consumption exclusive of government wages.

30. The immediate deduction scheme for corporations outside the three largest metropolitan areas and for small- and medium-sized enterprises, although comprising some economic rationale in terms of supporting investment and regional development, also created unintended loopholes and distortions, cf. Box 9. With respect to consolidation rules, these were considerably more lax than in most other OECD countries (*e.g.* implying that transfer of negative income from a subsidiary to a parent company could take place even though the ownership of voting shares in the subsidiary was less than 50 per cent). According to the new rules, ownership now has to exceed 50 per cent and foreign resident subsidiaries can no longer be included in a Mexican tax consolidation group. Furthermore, the maximum amount of earnings or losses of a subsidiary that may be consolidated is now 60 per cent against previously 100 per cent. Consolidation rules are now more in line with rules in the rest of the OECD but there may still be room for some further tightening.

31. Moreover, enterprises in agriculture, fisheries and publishing only pay half the standard rate, *i.e.* 17 per cent of taxable income and 0.9 per cent in assets tax.

32. The most widely used fringe benefits in OECD countries are food, discounts, transportation, leisure facilities, accommodation, medical and dental insurance, financial insurance and education expenses. For Mexico the non-taxed fringe benefits also includes child care, while excluding food and accommodation. Nearly all OECD countries tax employer-provided motor vehicles and accommodation, and nearly half of the countries tax insurance arrangements and leisure facilities.

complicates tax administration. A rough calculation would suggest that the direct effect of completely eliminating the major preferential regimes described above could provide as much as 3 per cent of GDP in additional tax revenues.³³ This estimate does not take into account additional positive revenue effects from increased compliance if preferential regimes were removed. Nor does it consider any potential dilution of revenues due to substitution between formal and informal activity, increased tax avoidance or the possibility of increased substitution between consumption and savings, as well as between leisure and work. On balance, however, these indirect effects are likely to be small compared with the significant increase in revenues that would certainly arise as a direct consequence of the elimination of preferential regimes.

20. The informal sector would appear to be another target for base widening. Individuals and enterprises in the informal sector do not pay income taxes and retail sales from vendors in the informal sector are, to some extent, escaping consumption taxes (although often only in the final transaction). However, the informal sector may not have a large direct impact on tax revenues as the larger part of it seems to be related to micro-business and low-skilled/low-income employment. By some estimates as much as 90 per cent of the workers in the informal sector earn less than three times the minimum wages and would thus be eligible for a negative tax payment were they registered as wage earners in the formal sector.³⁴ Moreover, most of the corporate activity would be taxed under the small taxpayer system. It is thus doubtful whether incorporating larger parts of the informal sector into the formal sector would provide much additional tax-revenues -- in fact, it could even be a drag on tax revenues, at least in the short term, due to the tax credits. However, the non-taxation of higher-income individuals and firms in the informal sector and the size and visibility of informal activities have negative effects. They contribute to horizontal inequity, lower tax morale and complicate the political process of raising revenue from those already paying taxes.³⁵ The task of integrating the informal economy is complicated by the fact that a major proportion of the labour force is self-employed,³⁶ and that self-employment in the formal sector and informal activity are often combined or close substitutes. The same problem relates to the large -- and growing -- number of small and micro-enterprises.³⁷

33. This assumes that: (i) the potential tax-contributions from agriculture and transportation would be proportional to their contributions to GDP; (ii) consolidation rules are tightened further; (iii) taxable individual income would increase by one-third as fringe benefits are taxed; (iv) the fiscal subsidy would be eliminated without compensatory reductions in rates, and (v) finally -- in accordance with the authorities' estimate -- the effects from eliminating VAT exemptions and the zero-rate, while keeping the standard rate at 15 per cent, would increase VAT revenues by 1.6 per cent of GDP.

34. The question then arises why these workers do not take advantage of the negative tax credit. The main answer is that most workers in the informal sector are not there by deliberate choice but because of shortage of jobs in the formal economy (and self-employed in the formal sector are not entitled to the tax credit). Moreover, for some individuals there could also be an incentive to work as wage earners in the informal sector to the extent the "tax rebate" for the informal enterprise is shared with workers. Finally, the social benefits obtained by entering the formal sector (including health care, pensions and the potential tax credit refund) may not always be perceived as sufficiently attractive. The other side of the coin is that, in contrast with a number of other OECD countries, no benefits are lost when entering work in the formal sector -- which provides incentives for integration.

35. According to the views expressed by several private sector representatives, the non-taxation of the informal sector is one of the most serious tax concerns of enterprises in the formal sector.

36. Around one-third of total employment are self-employed, which is comparable to Turkey, Greece and other Latin American countries, but is a much higher share than in other OECD countries. In the United States and Canada, for instance, self-employment is only around 10 per cent of total employment.

37. For example, only 13 per cent of employees of micro enterprises are declared to the social security system (IMSS). Source: *Encuesta Nacional de Micronegocios*, 1994.

21. Two other potential areas for increasing tax capacity would be excises and taxation of property. On both accounts, Mexico falls behind most other OECD countries and also some of its Latin American neighbours (Table 5). With respect to excises, the recent step to increase the tariff rates on gasoline and diesel should be seen against the fact that fuel prices by international standards are very low in Mexico, although not lower than in the United States and Canada. In contrast to most other OECD countries, which view inherited wealth as a legitimate base for redistributive taxation, Mexico does not levy taxes on individuals' wealth or on inheritance and gifts. Such taxes imply double taxation of capital and may thus have some adverse impact on investment, although this effect is likely to be small in most countries. Moreover, they are often difficult to enforce, and in general they do not provide significant revenues in countries where applied. Taxation of immovable property is administered by the municipalities with the tax being levied on the value of property. A main barrier for raising revenue from this tax appears to be inadequate valuation practices and lax local administration and enforcement of collection.

(Table 5. Revenues from property taxation and excises, 1996; gasoline prices, 1998)

Tax administration

22. Significant efforts have been made in the last few years to improve the effectiveness of tax administration, but there is still scope for improvement in several areas. A major complicating feature for tax administration is the existence of numerous preferential regimes and loopholes, and to a lesser extent, the significant informal sector. The attempts made in recent years to improve administration have covered a broad range of measures. Control of corporate income taxes has been strengthened through the assets tax, which was introduced in 1989 (and later amended on several occasions with the aim of reducing negative effects on investment decisions). Tax administration of small enterprises has been made easier by the introduction of a special regime for small taxpayers, which should also facilitate integration of informal enterprises into the formal economy. Furthermore, the reform of the pension and health-care system is expected to provide better incentives for tax compliance. Various administrative measures have also been taken: to enhance control more widely; to specify and improve the legal framework, including sanctions and penalties in case of fraud (which now include the possibility of prison sentence); and finally, in 1997, to modernise the administration itself by establishing an autonomous administrative body under the Ministry of Finance,³⁸ and creating a professional "career" for employees of the tax administration. Box 6 summarises the measures implemented in the last few years to improve collection and control. The reform strategy mainly relies on tighter supervision of the largest taxpayers, more -- and better targeted -- auditing, as well as tighter surveillance of imports, which typically constitute a "grey area" in terms of taxation.³⁹ With respect to filing requirements, corporate entities in the general regime are obliged to submit detailed information to tax authorities on a regular basis. Individual taxpayers with income from more than one source (and above a certain limit) are obliged to file an annual tax form. Wage income is subject to monthly withholding of income tax at source, and corporate taxes are paid as monthly advance payments (or quarterly for small enterprises). Taxes on interest payments are withheld at source.

23. Although it is still too early to evaluate the full achievements of the administrative initiatives of recent years, some indicators point to improved effectiveness. Fiscal presence, *i.e.* number of audits per taxpayer (corporate and self-employed), has thus increased dramatically since 1996 and is now only slightly below the level in *e.g.* Spain. Moreover, there has been a shift in the structure of auditing towards

38. SAT (Tax Administration Service) covers all the four main areas of tax administration: legal interpretation; auditing; collection; and customs. This is done via 65 local offices, each of which perform all four areas locally. SAT has some 30 000 employees. Internal control procedures are in place to prevent and detect fraud and corruption within SAT staff.

39. This strategy follows broadly the guidelines recommended in much of the literature on tax administration, including Mansfield (1988) and Tanzi and Pellechio (1995).

specific audits, which have proven to be relatively efficient in terms of revenue collected per auditor. But, even though the reform of administration seems to be moving in the right direction, there is still scope for increasing effectiveness further -- in terms of integrating registers in the social security system with that of tax authorities; improving import registration and control, for instance by extending even further the already close co-operation with US and Canadian customs and tax authorities; improving third party reporting requirements and the processing of tax information, *e.g.* through simplified individual tax forms, electronic processing etc.; increasing skills at the local tax administrative levels; and strengthening enforcement and the legal framework for collecting taxes, including legal certainty for tax payers. In the longer term it would also be appropriate to integrate the municipalities' registration of street vendors and real estate valuation registers into the central tax registers.

Box 6. Recent initiatives to improve tax administration and control

Several measures to *modernise and simplify the tax administration* have been taken in recent years, including:

- creation of the Tax Administration Service (SAT) from 1 July 1997 as a decentralised institution with budget and management autonomy, to administer tax and customs policy designed by the Ministry of Finance and to issue norms to accomplish its function;
- establishment of a professional career for tax employees;
- changes in the regulation of consolidated enterprises;
- changes in definitions and sanctions for tax fraud including strengthening the taxpayers' legal certainty;
- new measures against the use of tax heavens;
- reduction of information requirements in tax forms and requirements to keep accounting records (from 10 to 5 year);
- electronic file returns and payments (*e.g.* through Internet).

Main developments to *improve surveillance and enforcement* have been:

- introduction of a special regime for small enterprises;
- tightening of transfer pricing rules;
- shortening the delays for initiating the surveillance process by updating, on a permanent basis, the federal tax registers to be able to identify more rapidly the non-submission of a tax declaration;
- improved incentives for states to carry out audits more efficiently, as they are allowed to keep additional revenues;
- monitoring changes in taxpayers' behaviour and differences in contributions over time;
- identification and registration of the 8 000 largest taxpayers in a special database. These taxpayers contribute some 60 per cent of all tax revenue. The idea is to develop a close relationship with these taxpayers in order to minimise resources devoted to them, thereby freeing up personnel to increase the effort towards other taxpayers;
- improved auditing of small and medium-sized enterprises' issuance of invoices. In the first nine months of 1998 nearly 100 000 small and medium-sized enterprises were audited (out of a stock of some five million) compared with only 6 000 in all of 1997. Sanctions were imposed on nearly 70 000 enterprises and some 6 000 were closed temporarily. The sample has mainly been chosen in typical "problem areas" like: medicine, restaurants, jewellery stores, construction, material retailers, liquor stores, department stores and shopping malls;
- more control of VAT evasion and the informal sector by enhanced import registration. Under-valuation and non-registration of imports are important sources of VAT evasion. Besides being a tax collection problem the under-valuation of imports creates an unfair competition for the formal private business sector. A database has been constructed to register importers and exporters by tariff codes. The database contains information of the volumes and unit prices, making it easier to identify "suspiciously low" unit prices. Exchange of information with US customs, US Internal Revenue Service and the Canadian authorities is increasing, but it is still far from being fully effective.

The tax system and income distribution⁴⁰

24. Even though distributional objectives to some extent can be achieved through progressivity in the tax system, it is widely recognised that such objectives are more efficiently handled from the expenditure side. The issues that Mexico will have to address concerning income distribution and taxation thus primarily involve how much progressivity is needed to raise sufficient revenues in order to allow for more public spending -- including on improving distribution. Related concerns would be how incentives are affected, how the progressivity should evolve along the income scale and to what extent distributional objectives can be achieved through progressivity. A major consideration in this respect is how changes in marginal statutory rates for the most affluent income groups would affect avoidance and evasion, and thus influence the actual progressivity of the system (*i.e.* taxes paid by income deciles).⁴¹ The wide income distribution in Mexico significantly limits the base for individual income taxation. First, 70 per cent of wage earners in the formal sectors are not paying income taxes at all, but receive negative tax payments from the tax credit. Out of 15 million registered individual taxpayers in Mexico, only some four to five million are thus paying income tax -- which should be seen against the needs of a population of 90 million people. Second, although tax rates for high-income individuals are still relatively low in Mexico, there may be limited scope for significantly increasing their effective tax rates as these income groups may have access to instruments for shifting income into domestic or foreign low-tax regimes. Mexico is thus in line with an international pattern showing a distinct relationship between income distribution and tax revenue, whereby higher income inequality (after tax), measured by the Gini coefficient, is associated with lower tax revenue as a percentage of GDP (Figure 8).

(Figure 8. Tax revenues and the distribution of income after tax, 1996)

25. The tax system influences the distribution of income, primarily through its overall progressivity, but also indirectly through effects on relative wages and employment.⁴² The statutory progressivity of the Mexican tax system ranks roughly in the middle compared with other OECD countries (Figure 9), when measured as the difference between the top statutory rate and the average tax rate for an average production worker.⁴³ However, as is evident from Figure 10, progressivity in theoretical effective rates (combining the statutory rates, the tax credit and the tax subsidy, as defined above) is much steeper at the lower end of the income scale than for higher incomes, in particular those above ten times the minimum wage. Moreover, progressivity has increased quite sharply since 1993 for incomes between two and four times the minimum wage, due to a proportionally larger reduction in effective tax rates for these income groups than for incomes above ten times the minimum wage. This should be seen against a decline in real wages of around 18 per cent since 1994, implying that problems of poverty at lower levels of income, if anything, have increased.⁴⁴ The increased progressivity at lower income levels is also likely to have

40. The problems related to income distribution and poverty in Mexico are treated in more depth in the 1995 *Economic Survey on Mexico*.

41. See Box 8 below, which elaborates on this discussion.

42. Whereas a high progressivity can be a desirable feature of the tax system from distributional objectives, it also tends to imply adverse economic consequences in terms of distorted incentives (not least in terms of under-investment in human capital) and increased evasion and avoidance. Moreover, a high overall progression may in some cases be incompatible with the international mobility of production factors.

43. Unfortunately, the available data for Mexico do not allow for comparisons of income distributions before and after tax, as an alternative measure of progressivity. See for instance Norregaard (1990).

44. To the extent that changes in minimum wages have differed from general wage developments this conclusion could be modified. However, over recent years, minimum wages have generally moved with average wages, so that the comparison over time of progressiveness remains valid.

exacerbated problems of under-declaration of income.⁴⁵ A flattening of the progressivity at the lower income levels could, for instance, be achieved by extending the interval over which the tax credit is withdrawn and widening the brackets of the income-tax system, although this measure would probably involve substantial cost in terms of revenue foregone. Increased progressivity at the higher income levels could be obtained through higher rates⁴⁶ or by replacing tax reliefs, which are deducted at the highest rate, with tax credits. The latter option is not likely to be very effective, however, since Mexico only allows for rather limited tax deductions at the individual level. In order to achieve higher actual progressivity for high-income earners it would also be necessary to improve enforcement to make the recent increase in top statutory rates more effective. Another relevant aspect of taxation and progressivity is the allocation of income between monetary and non-monetary income. In the case of Mexico, this appears to contribute to a higher actual progressivity (Box 7), although the effect should probably not be overestimated.

(Figure 9. Overall progressivity of individual income tax systems in selected OECD countries, 1996)

(Figure 10. Theoretical effective tax rates for different levels of income)

Box 7. Income allocation for different income levels

The Mexican after-tax income distribution shows a pattern in which the share of wage income increases with overall income, and the share of non-monetary income is highest among the lower-income deciles (Figure 11). Although the share of property income increases with income, it is still a relatively small part of total income at the highest income decile -- amounting only to around 2.2 per cent of total income. The non-monetary income consists, to a large extent, of own-consumption (for example, of home-grown farm products) at the lower deciles, whereas it almost entirely reflects imputed rent of owner-occupied housing at the higher end of the income scale. Progressivity in the individual income scheme is thus compounded by the differences in monetary versus non-monetary income, and consumption taxes are less regressive than otherwise (*ceteris paribus*, *i.e.* even without considering the incidence of the zero-rated base), due to the distribution of own-consumption.

(Figure 11. Income sources by decile, 1994)

26. Another channel of redistribution is the taxation of consumption. Many OECD countries have traditionally applied lower rates or exemptions to basic staples like food and medicine in order to introduce some progressivity into the VAT system. This typically implies a considerable dead-weight loss as people at higher income levels are compensated most in absolute terms since they consume more of all goods and services. In the case of Mexico, the total implicit subsidy due to the zero-rating on food can be estimated at some 1.8 per cent of GDP.⁴⁷ The distribution by income deciles shows that the highest decile captures nearly 30 per cent of this amount, while the lowest three deciles together receive only 12 per cent of the

45. This has also provided a stronger incentive to work in the informal sector, at least for individuals with incomes above three times the minimum wage (*i.e.* where tax payments become positive). In practice, however, this effect is likely to be of minor importance given the low levels of income in the informal sector.

46. The 1999 tax package increases the top individual statutory rate from 35 per cent to 40 per cent (cf. Box 9).

47. Total consumption of food by private households times the standard rate of 15 per cent (*i.e.* account is not taken for the border rate of 10 per cent, but this is not likely to have significant effects). The consumption of food is approximated from total household expenditure according to the 1996 household survey and the relative weight on food and non-food per decile from the 1994 survey. The estimate of the subsidy does not consider substitution effects between consumption and savings or within the consumption basket when prices changes.

value of the subsidy (Figure 12). Measured as a per cent of household income, the implicit subsidy amounts to nearly 4 per cent for the highest decile and 5 per cent for the lowest decile. If the zero-rate on food were fully eliminated, all else being equal, total tax revenues would increase by the value of the subsidy, *i.e.* 1.8 per cent of GDP, or nearly 15 per cent.⁴⁸ A politically more viable option would probably be to retain the zero-rating on basic staples, like milk, bread, tortillas and eggs. Applying the zero-rating only to these goods would imply an implicit subsidy of only 0.4 per cent of GDP. Moreover, compensating, for example, the first four income deciles for the loss of subsidy on the rest of their food consumption (via direct income transfers or an extended tax credit) would only amount to some 0.25 per cent of GDP,⁴⁹ leaving a total budgetary gain of more than 1 per cent of GDP. The extent to which compensation should be given through retaining zero-rating on a few basic staples or through expenditure schemes, or both, is a political question tightly linked to the overall distributional objectives. However, it should not divert attention from the significant budgetary gains that are likely to arise in any circumstance from eliminating, or reducing drastically, zero-rating and exemptions in the VAT regime.

(Figure 12. Distribution of implicit VAT subsidy, 1996)

27. If zero-rating and exemption of goods and services were to be completely eliminated, or at least concentrated on a few basic staples, the question would arise as to how in practice to provide compensation to the lower-income groups. One way would be to extend the tax credit for these groups by an amount based on cost-of-living indices for reference low-income families. However, such compensation would only benefit wage earners who work in the formal sector, *i.e.* a minor part of the population. Another potential problem is that the tax credit payments are administered by the employers, who might be tempted to try to shift higher credit onto lower wages. Fraud could also be a potential problem. A better option might be to use the individual pension savings accounts (AFOREs) for workers included in the social security system into which the government could make direct transfers. The problem would remain, however, of non-coverage of individuals outside the formal sector. The poorest families could be compensated by expanding the targeted poverty-alleviation programme (PROGRESA) to cover a much larger number of families. It would probably be more difficult to reach those who are poor, but not poor enough to be covered by PROGRESA, and not working in the formal sector. For these groups, a separate compensation mechanism would have to be created and eligibility criteria chosen (for instance income below three minimum wages). Still, a number of problems arise besides the political difficulties involved in overhauling the VAT system. First, the compensation scheme will necessarily increase effective marginal tax rates for those not included (even though a gradual phasing out of the compensation could mitigate this problem). Second, there are no instruments in place to ensure that individuals covered by PROGRESA do not, at the same time, have an AFORE account, thus being compensated twice -- although the risk for overlap is presumably small.⁵⁰ More significant is the risk that some individuals would have more than one AFORE account, as is currently the case due to still imperfect registration. Finally, some of the increased revenue from the VAT would have to be shared with the states, leaving the marginal budgetary gain for the federal government somewhat smaller.

48. The "all else being equal" assumption implies, among other things, that potential positive revenue effects from higher compliance (in the absence of multiple regimes) are not taken into account.

49. This calculation is an approximation that does not consider compensation in terms of maintaining the same bundle of goods or the same utility level. At the practical level this is of minor importance.

50. Furthermore, to the extent such problems exist they could be viewed as a problem of PROGRESA targeting rather than one of registration.

Box 8. Taxing the affluent more

Given the highly unequal income distribution and low revenue raising capacity in Mexico, taxing the highest-income individuals more heavily have advantages, although this involves questions about both value judgements and economics.¹ One possibility would be to raise income-tax rates for the highest-income individuals. The tax revenue effects of such a move are often uncertain due to increased avoidance and evasion incentives for the high-income groups -- in particular for countries where top marginal tax rates are already high. This uncertainty, in turn, points to the importance of a strong enforcement of tax compliance to accompany any increase in top marginal rates. There is also a risk that increased taxation could entail a reduction in "entrepreneurial" and other socially productive activity among these tax payers.² Another pertinent concern, especially for countries with a structural need to increase private savings, is the effect that higher income taxes on the richest individuals would have on total private savings. It is often assumed that saving ratios increase with income, thus implying a trade-off between income distribution and private savings. However, this assumption could be called into question both empirically and theoretically: in a life-cycle framework, for instance, there would be a positive savings effect in redistributing income from the elderly to the young through a more progressive tax system (Slemrod, 1998).

Mexico has recently, in its 1999 tax package, opted for increased statutory rates for the highest income individuals. However, the new top marginal rate for individuals -- at 40 per cent on both wage income and dividend income -- is still among the lowest in OECD and it remains considerably below the top marginal rates on wage and dividend income in the United States and Canada (including state/provincial taxes). Nevertheless, the rise in rates increases the importance of further strengthening of enforcement in order to ensure compliance. Other ways of taxing the affluent more include abolishing some of the exemptions related to taxation of capital income, as well as introducing gift and inheritance taxes (although this would imply introducing some double taxation of capital). One alternative could be taxation of (large) real-estate holdings. Real estate taxes are less easy to evade than taxes on financial assets and with a sufficiently high minimum limit, it would be possible to achieve a progressive profile. Finally, the massive exemptions and zero-rating in the VAT system subsidise the top income decile households by an average of 4 per cent of their disposable income. Therefore reducing the preferential treatment of consumption to a minimum would be one way of taxing the most affluent households at higher effective rates.

-
1. Simple theoretical models of optimal income taxation do not necessarily point to sharply progressive tax structures even if society places a relatively high weight on the welfare of the less well off individuals. This conclusion, though, depends critically on the sensitivity of labour supply to the after tax wage-rate. With a low elasticity, redistributing income through the tax system could take place at low marginal cost, thus implying highly progressive tax structures (Slemrod, 1998).
 2. In the United States, where the top 1 per cent of individual tax payers contributes nearly 30 per cent of total federal income tax revenues, there is no solid empirical evidence showing measurable macroeconomic effects of the substantial fluctuations in income taxation of the rich that has taken place over the 1950-97 period (Slemrod, 1998). Evidence from the Tax Reform Act of 1986, suggests considerable responsiveness in the timing of economic decisions (for instance, the pattern of realisation of capital gains) as well as financial and accounting responses (for instance corporations shifting status), whereas the evidence of the response of real activities by firms and individuals, *i.e.* with respect to savings, labour supply and investment, is more mixed. Evidence from the 1993 marginal tax rise in the United States (OBRA93) also suggests that the response to tax changes is to a large extent a question of short-run shifts in the timing of compensation rather than a permanent reduction in taxable income. The dead-weight loss of this particular tax increase, based on short-term elasticities, may thus have been considerable (as much as twice the revenue generated according to Feldstein *et. al.*, 1996), but when shifts in the timing of *e.g.* exercising stock options are taken into account, a much lower estimate is found. Correcting for such transitory effects, Goolsbee (1997) thus arrives at an estimated dead weight loss of 15-25 per cent of the revenue generated.

*Fiscal federalism*⁵¹

28. Sub-national governments (states and municipalities) only collect a small part of total tax revenues, *i.e.* around 5 per cent in recent years. This is below the level in most other OECD countries, as well as Argentina and Brazil, but not much different from the situation in for instance Greece, Portugal and Chile (Figure 13).⁵² On the expenditure side, however, the role for sub-national governments is greater with around 20-25 per cent of total expenditure being administered at the state and municipality level. Against this background, the federal government is engaged in a process of strengthening sub-national fiscal autonomy by the devolution of additional spending and taxing responsibilities, increasing transfers and improving administrative co-operation between the federation and lower levels of government. In most recent years, the spending responsibilities of lower levels of government have increased, in particular, within the areas of education and health care.

(Figure 13. Tax collection by level of government in selected countries, 1996)

29. A key issue is how to ensure spending efficiency and accountability given that the local governments are only faced with a small part of the burden of financing. In particular, if the marginal financing of spending is (near) zero for the local authorities, moral hazard problems might occur. Thus, while potentially beneficial in terms of allocative efficiency of public expenditure (by bringing the spending decision closer to the needs of the citizens), increased decentralisation also carries considerable risk: possible loss of macroeconomic and budgetary control by the central government; insufficient administrative capacity at the local level; higher overall administrative and compliance cost; excessive tax and expenditure competition between different regions; and concessions to local political pressure groups. A major challenge for the Mexican authorities over the coming years would thus be to establish mechanisms whereby further decentralisation can be achieved while limiting the scale of such problems. This may involve careful targeting of grants based on objective expenditure needs (a nationally agreed minimum cost per pupil, per patient etc.), improved information and accounting systems as well enhanced incentives for local governments through tighter links between spending and financing decisions.

30. Financing of sub-national government in Mexico mainly takes place through a revenue-sharing scheme, in which the federal government transfers around 25 per cent of its so-called “sharable” revenue to the states and municipalities. Most of the transfers are given as unconditional grants. The “sharable revenue” consists of most federal taxes except for the additional and extraordinary fees from extraction of petroleum,⁵³ the federal tax on new motor vehicles and the tax on usage of cars, which are directly appropriated by the states, and a percentage of excise taxes on tobacco and alcohol. The share of total transfers going to each state is primarily determined by its revenue collection capacity (*i.e.* a sort of compensation from the federation for revenue “foregone” by the state) and population size. A third element, amounting to less than 10 per cent of the total sharable revenues, is used as an equalisation mechanism through which poorer states receive more.

51. This subject is treated at more length in the 1995 *Economic Survey of Mexico* (Annex II), including a description of activities and responsibilities of sub-national levels of government in Mexico and other OECD countries.

52. These numbers do not necessarily reflect the taxing autonomy of sub-national government, in particular because they do not reflect revenue sharing arrangements.

53. This exemption implies in certain circumstances that the federal government has an incentive not to increase the regulated fuel price by too much: if the (sharable) excises are high due to a large difference between the regulated price and the world market price, the (non-sharable) oil fees will have to be correspondingly lower in order not to exceed PEMEX’s 60.8 per cent total contribution.

31. Mexican states face few constitutional limitations as to their taxing powers, but they are in practice severely restricted by the Law on Fiscal Co-ordination that regulates tax responsibilities between different levels of government. At present, the states levy a small number of minor taxes, including a payroll tax, a tax on transfer of property, a tax on old motor vehicles, a tax on hotel accommodation and a tax on lotteries. In addition, they may levy fees for some public services. The states are also allowed to keep any additional revenue collected as a result of audits conducted in the area of income tax, assets tax and VAT.⁵⁴ The municipalities have a constitutional right to tax local real estate and to levy local fees. Even though it would be desirable to increase revenues from immobile property, perhaps even significantly, the administrative and political barriers may be prohibitive in the short term. However, in the longer term, a more adequate valuation and tighter administration of property taxes could turn property taxation into a more important source of revenue at the local level. Apart from its benefits in terms of strengthening the autonomy and revenue base of municipalities, this would probably have the effect of placing more of the tax burden on the income groups with most capacity to pay taxes. In the medium term, other revenue mechanisms could include the possibility of income or consumption (final sales) taxation at the sub-national level, although problems of administration and mobility may hamper the effectiveness of such taxes. In the process of delegating more responsibility for taxation to sub-national levels of government, it is imperative that the efforts of states and municipalities to raise revenue are consistent with the overall aims of the tax system (such as minimising non-neutralities) and that negative externalities on other regions or the federal government are minimised.

Budgetary volatility

32. The budget in Mexico is more exposed to volatility than it is in most other OECD countries. Historically, a major source of this volatility has been macroeconomic instability, partly reflecting macroeconomic policies in Mexico, but partly also a characteristic of emerging market economies generally. A more specific source of volatility has been movements in world oil prices, given the importance of the oil sector for the budget and the overall economy. The linkage between oil price changes and the budget is non-trivial. For instance, economic slowdowns or crises in Mexico have often been associated with a depreciation of the peso against the US dollar, in which case oil revenues (*i.e.* royalty contributions from PEMEX) have increased in peso terms at the same time as revenues from other tax sources were declining. This has historically, *i.e.* since 1980, resulted in a negative correlation between oil and non-oil revenues. Indeed, the total tax revenue in per cent of GDP (including PEMEX contributions) has been less volatile than the tax revenue excluding PEMEX contributions (Figure 14). However, in general there is not a straightforward and fixed relationship between the developments in oil prices and the real economy, and hence between oil and non-oil revenues (Figure 15).⁵⁵

(Figure 14. Coefficient of variation in tax revenue and primary expenditures)

(Figure 15. Oil revenues, oil prices and real GDP growth)

54. Recent changes in the tax responsibilities of local government are described in more detail in Annex I.

55. The episodes of 1983/84 and 1994/95 illustrate how the growth rate of the real economy (and thus the non-oil tax base) sometimes can be strongly negatively correlated with the change in PEMEX contributions, whereas the episodes of 1987 and 1990 show the opposite pattern.

33. Another salient feature of Mexico's budget experience is the high degree of volatility in primary expenditure as a percentage of GDP. This is an indication that the impact from revenue shocks on the budget has, to a large extent, been absorbed through discretionary spending adjustments in order to meet deficit targets. As a result, pro-cyclicality of government spending has contributed to macroeconomic volatility.⁵⁶ The high volatility in expenditure is undesirable from a macroeconomic smoothing point of view and in terms of its impact on the effectiveness of spending directed at programmes that are essential for the longer-term development of the country -- *e.g.* infrastructure, basic education and health care and poverty alleviation. This points to the need of promoting a more stable development in both oil and non-oil revenues. With respect to the latter, broadening the tax base and improving administration as discussed above, would help to stabilise non-oil revenues -- and thus lessen the budget's dependency on oil revenues and thereby the vulnerability to exogenous shocks. This, in turn, could pave the way for a sustainable long-term solution to dampen the impact on the budget from fluctuations in oil revenues.

34. There are, in principle, several ways of fully or partially insulating the budget from the direct effects of sharp fluctuations in oil-prices and thus royalty contributions from PEMEX. One solution could be to privatise major parts of the oil sector and design the transaction in such a way that it allows a substantial reduction of the risk borne by the government. However, major privatisations in the oil sector are probably not an option in the short and medium term. Another solution is the creation of a fund outside the government accounts to absorb the direct budgetary effects from short-term fluctuations in oil prices. Although such a fund does not avoid the government sector's exposure to oil-price volatility, it spreads it over longer time horizons, thereby making it less costly for society.⁵⁷ Norway and Chile are among the countries which have opted for some revenue stabilisation via the creation of funds for commodity-related revenues.⁵⁸ In Mexico, a contingency fund has been established in the budget for 2000. Budget provisions determine that 40 per cent of windfall revenues (above a certain limit) should be deposited in the contingency fund -- the rest being used for public debt redemption. Windfall revenues might arise, for instance if the price of oil rises above the budget assumption, but also if economic activity is stronger than projected, if tax collection is more effective, or because of other factors. However, no rules have been drawn on how, or when, to use the proceeds placed in the fund, or on how to invest its assets. Hence, it is still too early to gauge the practical effects of this initiative on fiscal policy and budgetary volatility.

56. See also the Inter-American Development Bank (1997).

57. A third potential solution could be to link part of government expenditure to oil prices by issuing government debt indexed to the oil price. Such commodity linked securities are not an uncommon phenomenon. However, markets for such bonds are normally less liquid than markets for more ordinary instruments, implying a premium. Moreover, investors will have to be compensated for the oil-price risk, so that the overall additional costs of such a programme might outweigh the advantages.

58. Chile's copper stabilisation fund was established in 1987 in order to mitigate the fiscal impact of fluctuations in copper prices (copper is some 40 per cent of Chile's total exports and the state copper company CODELCO normally contributes 5-10 per cent of total tax revenues). The fund receives transfers from CODELCO when export prices exceed a certain threshold and transfer resources to the treasury when prices fall below the threshold. The impact of this stabilisation mechanism has tended to diminish in the 1990s as the share of copper produced by private companies has increased strongly. The Norwegian Petroleum Fund, created in 1991, serves a broader purpose: by investing the fiscal surplus in financial assets abroad, the government fund also aims to offset the net currency inflows associated with oil, in order to stabilise the exchange rate.

V. Conclusion and options for further reform

35. Further reform of the Mexican tax system in order to raise its revenue generating potential is one of the main keys to dealing properly with many of the challenges facing the economy, including improving the physical and human capital stock, *i.e.* developing the social infrastructure and the health care system. The tax system contains many commendable features that contribute to limiting non-neutralities and distortions to incentives. Effective average tax rates on consumption, labour and capital appear to be low compared with other OECD countries and statutory marginal tax wedges on labour income are also relatively modest for most wage levels and family types. The adverse effects from high and volatile inflation are largely neutralised through indexation and the personal and corporate income taxes are integrated so as to avoid double taxation of dividends and distributed profits. This helps to make the tax system reasonably neutral in terms of its impact on different types of investment and financing instruments.

36. However, with respect to practical implementation there is still ample scope for improvement. In particular, the extensive preferential regimes that exist in the taxation of consumption, individual income and corporate income should be reduced to a minimum and the administrative surveillance and enforcement should be strengthened further. The administrative improvements should go beyond those that would automatically derive from a more comprehensive tax system. Besides increasing the revenue generating capacity of the tax system *per se* such measures taken together would also reduce the dependency of the budget on oil-related income.

37. Reforms to the tax system would have to take into account considerations relating to income distribution, expenditure needs and the quality of spending as well as the issue of how to integrate the informal sector into the formal economy. Another pertinent issue would be the scope for granting local governments more taxation and expenditure responsibilities. Many of these elements are stressed in the Government's agenda as laid out in the *National Development Plan 1995-2000* and reiterated in 1997 in the PRONAFIDE, the medium-term programme for financing development. However, the changes made to the tax system in recent years have generally not succeeded in increasing the tax-to-GDP ratio. The budget for 1999 aimed to increase federal government tax revenues by around 1 percentage point of GDP from the 1998 outturn (see Box 9). Although this is significant compared with previous efforts, it will still be insufficient for longer-term spending needs. Additional measures in the area of taxation would thus be necessary in light of the challenges facing the tax system.

38. Substantial changes to existing tax structures -- be they formal or informal, administrative or legislative -- almost inevitably raise political difficulties. However, efforts to improve the system should benefit from the fact that the general tax regime is in many ways already adequately designed. In any case, the reforms carried out during the past decade cannot achieve their potential unless further steps are taken. A number of specific options, which follow from the above analysis, are listed in Box 10 below. Some of these could be seen as medium-term recommendations, rather than immediate priorities, and in general changes will have to be implemented gradually and with due consideration to balancing the interests of those being affected. Even though the recommendations could in principle be implemented on an *à la carte* basis, it should be emphasised that the package of measures, if implemented as a whole would be much more efficient and balanced than individual measures taken in isolation. If all of these initiatives were implemented together, they could raise tax revenue by some 3 percentage points of GDP, which seems to provide a reasonable benchmark for Mexico in the medium term.

Box 9. Changes to the tax system contained in the budget for 1999

The individual tax rate is increased from 35 per cent to 37.5 per cent for annual incomes above 1.5 million pesos and 40 per cent for annual incomes above 2 million pesos. Taxes on interest payments are modified accordingly and the exemption on interest income from long term bonds is eliminated. The corporate income tax rate is lowered to 32 per cent in 1999 and to 30 per cent in 2000 for retained earnings, while the rate for dividends is increased from 34 to 35 per cent. The immediate deduction scheme for investment outside the metropolitan areas of Mexico City, Monterey and Guadalajara, as well as for small and medium-sized firms, is abolished and consolidation rules are tightened. An increase in the tax on alcohol and beverages, which was introduced for one year in 1998, is maintained. Import tariffs have been raised for countries which do not have a free trade agreement with Mexico (the surcharge is 3 per cent for capital, intermediate and basic consumption goods; 10 per cent for other consumption goods).

Raising the top statutory rates to 37.5 and 40 per cent is warranted from a revenue and distributional point of view, although increased avoidance and evasion at higher levels of income to some extent could reduce the effect of this change. The taxation of interest income from long term bonds is a step forward in reducing distortions between capital and debt financing.

The changes made to corporate taxation have both benefits and drawbacks in terms of neutrality and their revenue-raising capacity. The tightening of consolidation rules is a step forward as it improves equity and reduces complexity and distortions (such as the incentive to preserve economically inefficient enterprises for tax purposes) as well as problems of tax segmentation and avoidance. The reduction of the statutory rate on retained earnings and the elimination of the immediate deduction scheme could be considered as a package aiming at keeping the overall effective tax rates for corporations roughly unchanged while reducing tax expenditure and distortions implied by the immediate deduction scheme. These distortions arose because only firms with a tax liability would benefit from the scheme, implying that the scheme was procyclical and that it introduced a bias against new firms and firms in high growth sectors. Moreover, it enhanced the possibilities for tax avoidance through transfer pricing. The lowering of the corporate rate should also be seen against the tendency in other OECD-countries and Latin American countries to reduce taxation of capital. However, given the relatively light taxation of capital in Mexico and the level of statutory corporate rates, it is not evident that the elimination of the immediate deduction scheme would necessitate a lowering of the rates -- on the contrary, the needs for raising revenues would suggest that the corporate rate should not have been lowered. Moreover, by introducing a wedge between dividends (taxed at a marginal rate of 40 per cent) and retained earnings (taxed at 30 per cent), a bias in favour of financing through retained earnings is created. The adverse effects of this change on capital allocation may be small though, as the share of distributed profits is relatively low in Mexico and because debt financing in any circumstance may be difficult to obtain for small and medium-sized enterprises.

Finally, the 1999 tax package contains a number of measures to curb evasion and informal sector activities, including: additional powers of the tax authority to incorporate new taxpayers (and thereby immediately initiate a tax audit), a change in the alcohol excise tax structure (*i.e.* the excise will only be applied at the producer level), a change in tax subject for specific operations in VAT (for certain operations between enterprises and individuals -- *e.g.* consulting -- the firm will retain the VAT and pay it directly to the government instead of paying it to the provider) and the elimination of the zero VAT rate for "indirect exporters".

39. In addition to the specific recommendations, two more areas have been identified where action might be appropriate -- at least in the longer term. First, in attempting to manage the informal economy, the government should use a "carrot and stick" approach that involves providing services in the formal sector that will attract potential taxpayers into the formal sector, *i.e.* law enforcement, in-work benefits, adequate social insurance, etc. The stick would then be coercive tax enforcement and control. Besides the beneficial social and economic consequences from integrating the informal economy, there would also be positive long-run effects on government tax revenues. The steps taken in terms of the reform of the pension system and the health insurance are important in this respect, as are the recent efforts of improving the tax administration, the introduction of the small taxpayers regime and several of the measures taken for 1999. However, further initiatives along the lines described above will still be needed in the medium to long term.

40. Finally, a transparent and autonomous stabilisation fund for oil revenues from PEMEX could contribute to ensuring greater stability for both revenue and expenditure. More important, however, is the fact that Mexico, as an emerging market economy, is more exposed to shocks arising in international markets than most other OECD countries. This underlines the need for a firm medium-term reference to support a stability-oriented macroeconomic policy.

Box 10. Strengthening tax revenue: a synopsis of policy recommendations

The VAT regime: the extensive zero-rating of goods should be limited to a few basic staples; the zero-rating for agriculture and fishing activities and the exemptions for land transportation should be eliminated; and the preferential border rate at 10 per cent should be changed to the standard rate (since the gains from a uniform rate in all likelihood will significantly exceed the short term losses that might arise from possible harmful impacts on local Mexican business in border areas). VAT is normally easy to administer and control, as two sides of the transactions until the final transaction is reported to the authorities. Moreover, it is an easy and efficient way to ensure that at least some tax revenues are raised from the informal sector. The current regime dilutes the neutrality of the consumption tax, limits the revenue deriving from individuals working in the informal sector and is a very inefficient mechanism for redistribution of income. Moreover, it considerably complicates administration, creating numerous possibilities of evasion and fraud. Compensation to low-income groups -- although not a trivial administrative and political problem -- could be provided directly through various transfer mechanisms (including the use of individual AFORES accounts and PROGRESA, for instance), but it could also take the form of in-kind benefits (school-based food programmes for children, food coupons, hospital or doctor-based nutrition programmes for pregnant women, etc.).

Corporate taxes: the simplified regime for agriculture and land transportation should be abolished, as should the special rate regime for agriculture, publishing, etc. The small taxpayers' regime should be preserved as a way to encourage greater integration of informal sector activity and to lower administrative costs. The assets tax should be maintained due to its importance as a controlling device. A further tightening of consolidation rules could be considered.

Individual income taxes: fringe benefits should be taxed and the fiscal subsidy eliminated. Taxing fringe benefits could potentially pose some additional administrative difficulties; on the other hand the elimination of the fiscal subsidy is likely to yield a non-negligible administrative relief. The proceeds of such changes might partly be used to reduce progressivity at the low- to medium-income levels.

Property taxes -- in particular real estate taxes -- should be increased, primarily by encouraging local government to make more adequate valuations and improve collection efforts. This would enhance the overall revenue base which supports local government finances, and it would probably be relatively progressive in its overall incidence.

Administration and enforcement should be strengthened by: increasing the number of trained personal, in particular at the local level; integrating registers of the social security system with that of tax authorities; enhancing import registration and control; improving auditing by further increasing the incentives for states to audit; strengthening legal certainty and enforcement; simplifying procedures for tax payments; and strengthening the effort against high income activities in the informal sector.

TABLES AND FIGURES

List of tables

1. Estimates of informal sector size in selected countries
2. Tax progressivity and distribution of wage-earners, 1997
3. Required real pre-tax rates of return, 1998
4. Indicators of VAT compliance and productivity
5. Revenues from property taxation and excises, 1996; gasoline prices, 1998

List of figures

1. Tax revenues and the level of income, 1996
2. General government expenditure -- average 1990-1996
3. Total tax revenues
4. Tax mix in Mexico, 1980-1996
5. Tax mix in selected countries, 1996
6. Marginal tax wedges by family type and wage level, 1996
7. Average effective tax rates
8. Tax revenues and the distribution of income after tax, 1996
9. Overall progressivity of individual income tax systems in selected OECD countries, 1996
10. Theoretical effective tax rates for different levels of income
11. Income sources by decile, 1994
12. Distribution of implicit vat subsidy, 1996
13. Tax collection by level of government in selected countries, 1996
14. Coefficient of variations in tax revenue and primary expenditures
15. Oil revenues, oil prices and real GDP growth

Table 1. **Estimates of informal sector size in selected countries¹**
 Informal sector employment in per cent of non-agricultural employment, mid-1990's

| | Per cent | |
|---------------|----------------------------|-----------------------------|
| | ILO estimates ² | OECD estimates ³ |
| Mexico | 57 | 20 - 44 |
| Argentina | 53 | -- |
| Brazil | 56 | -- |
| Chile | 51 | -- |
| Turkey | -- | 21 |

1. These estimates are subject to considerable uncertainty.

2. ILO, "World Employment 1996/97; National Policies in a Global Context".

3. Estimates published in OECD, *Economic Survey of Mexico*, (1997) and OECD, *Economic Survey of Turkey*, (1996).

Source: Ministry of finance.

Table 2. Tax progressivity and distribution of wage-earners, 1997¹

| Income expressed as a multiple of minimum wage | Theoretical effective tax rate ² | Number of workers (thousands) | Number of workers (per cent of total) | Cumulated number of workers (per cent of total) |
|--|---|-------------------------------|---------------------------------------|---|
| 1 | -22.3 | 1980.7 | 18.7 | 18.7 |
| 2 | -7.4 | 3740.3 | 35.2 | 53.9 |
| 3 | -1.7 | 1785.2 | 16.8 | 70.7 |
| 4 | 3.4 | 920.2 | 8.7 | 79.3 |
| 5 | 6.4 | 590.5 | 5.6 | 84.9 |
| 7 | 11.0 | 597.3 | 5.6 | 90.5 |
| 10 | 15.6 | 407.4 | 3.8 | 94.4 |
| 15 | 19.3 | 274.6 | 2.6 | 96.9 |
| 19 | 21.3 | 111.0 | 1.0 | 98.0 |
| 20 | 21.7 | 18.5 | 0.2 | 98.2 |
| 24 | 23.1 | 62.4 | 0.6 | 98.7 |
| 25+ | 23.4 | 133.3 | 1.3 | 100.0 |
| Total | -- | 10621.4 | 100.0 | -- |

1. Based on IMSS data as a proxy for number of workers by tax bracket.
2. The theoretical effective tax rates combine for each income category the statutory rate, the tax credit and the tax subsidy, and thus measure the taxes expected to be paid under full compliance with the tax law. Fringe benefits are assumed to account for one-third of total remuneration.

Source: Ministry of finance.

Table 3. Required real pre-tax rates of return, 1998¹

| | Sources of Financing ² | | | Physical Assets ³ | | | Overall Weighted Average ⁴ | Standard Deviation |
|---------------------------|-----------------------------------|------------|------------|------------------------------|------------|-------------|---------------------------------------|--------------------|
| | Retained Earnings | New Equity | Debt | Machinery | Building | Inventories | | |
| Mexico⁵ | 4.0 | 4.0 | 4.0 | 4.1 | 4.2 | 3.3 | 4.0 | 0.3 |
| United States | 3.9 | 7.6 | 3.1 | 3.5 | 4.8 | 4.1 | 4.0 | 1.6 |
| Canada | 6.7 | 7.3 | 3.8 | 4.6 | 6.4 | 7.4 | 5.7 | 1.5 |
| Germany | 3.2 | 2.4 | 2.7 | 2.6 | 3.3 | 3.3 | 3.0 | 0.4 |
| Greece | 6.7 | 6.7 | 2.2 | 4.6 | 3.5 | 8.4 | 5.2 | 2.3 |
| Portugal | 5.7 | 5.3 | 3.1 | 4.7 | 4.7 | 4.9 | 4.7 | 0.9 |
| Spain | 3.9 | 3.4 | 2.7 | 2.8 | 4.0 | 4.0 | 3.4 | 0.6 |
| New Zealand | 4.5 | 4.5 | 4.5 | 4.4 | 4.3 | 5.0 | 4.5 | 0.2 |
| Average | 4.8 | 5.1 | 3.3 | 3.9 | 4.4 | 5.1 | 4.3 | 1.0 |

1. The required real pre-tax rate of return an investment has to earn in order to provide a personal investor with the same real post-tax return as a bank deposit earning a pre-tax 5 per cent real rate of interest.
2. The weighted average uses the following weights: Machinery 50%, Buildings 28%, Inventories 22%.
3. The weighted average uses the following weights: Retained Earnings 55%, New Equity 10 %, Debt 35%.
4. The weighted average uses weights indicated in footnotes (2) and (3).
5. Assuming full indexation to inflation and immediate expensing of Inventories. The real interest rate is assumed to be 5 per cent, implying a 34 per cent tax on real interest income. No account is taken for the possibility of immediate deduction of certain kinds of investment (in practice amounting to 15 per cent of total investment). Changes for 1999 -- see Box 9 -- are not included in the calculation.

Sources: K. Gordon and H. Tchilinguirian (1998), "Marginal effective tax rates on physical, human, and R&D capital", *OECD Economics Department Working Paper No. 199*; and OECD Secretariat calculations.

Table 4. Indicators of VAT compliance and productivity

Per cent

| | VAT Compliance ¹ (1993) | VAT Productivity ² (1996) | Effective VAT rate ³ in per cent of standard rate (1996) |
|---------------|---------------------------------------|---|---|
| Mexico | 63 | 19 | 29 |
| Canada | 77 | 37 | 62 |
| Germany | -- | 45 | 77 |
| Greece | -- | 51 | 61 |
| Portugal | 86 | 47 | 79 |
| Spain | -- | 34 | 59 |
| New Zealand | 95 | 68 | 123 ⁴ |
| Turkey | -- | 40 | 61 |
| Argentina | 69 | 10 | -- |
| Chile | 77 | 51 | -- |

1. VAT compliance is VAT actually paid in per cent of theoretical VAT collected under full compliance with existing tax laws.

2. VAT productivity is VAT revenue in per cent of GDP divided by standard VAT rate.

3. Effective VAT rate is VAT revenue divided by base (i.e. consumption).

4. The general sales tax at standard rate is levied on 60 per cent of the value of the supply for long term stay in a commercial dwelling which may partly explain why the number exceeds 100.

Sources: Ministry of Finance; OECD *Revenue Statistics*; *National Accounts*; IMF, *Government Finance Statistics*; OECD, *Economic Survey of Turkey* (1997); and OECD Secretariat calculations.

Table 5. Revenues from property taxation and excises, 1996; gasoline prices, 1998

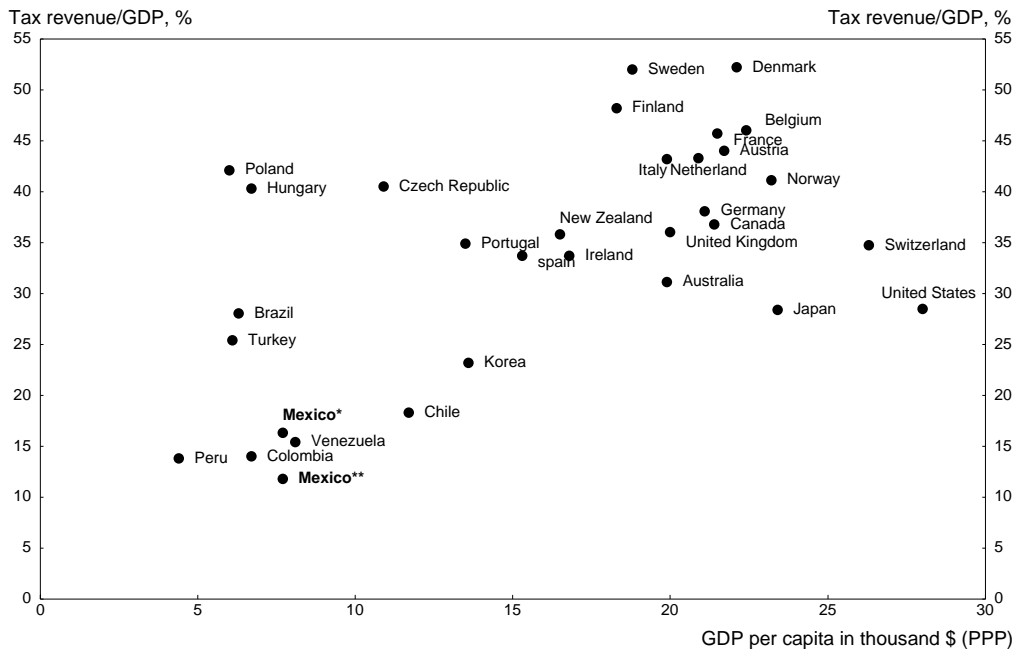
| | Taxes on property per cent GDP (1996) | Excises per cent GDP (1996) | Unleaded gasoline price including taxes US Dollars/litre (2nd Quarter 1998) |
|------------------------|---|-----------------------------------|---|
| Mexico | 0.3 | 1.2 | 0.40 |
| United States | 3.1 | 1.5 | 0.33 |
| Canada | 3.8 | 2.0 | 0.35 |
| Germany | 1.1 | 2.8 | 0.91 |
| Greece | 1.4 | 6.1 | 0.70 |
| New Zealand | 2.0 | 2.0 | 0.44 |
| Portugal | 0.9 | 5.1 | 0.90 |
| Spain | 1.9 | 2.7 | 0.75 |
| Turkey | 0.5 | 0.3 | 0.73 |
| Argentina ¹ | 1.4 | 1.0 | -- |
| Brazil ² | 0.4 | -- | -- |
| Chile | 0.1 | 2.0 | -- |

1. Figures for Argentina are for 1992.

2. Figures for Brazil are for 1993.

Sources: OECD, *Revenue Statistics*; IMF, *Government Finance Statistics*; IEA, *Energy prices and taxes*, 2nd Quarter 1998.

Figure 1. TAX REVENUES AND THE LEVEL OF INCOME, 1996 (1)



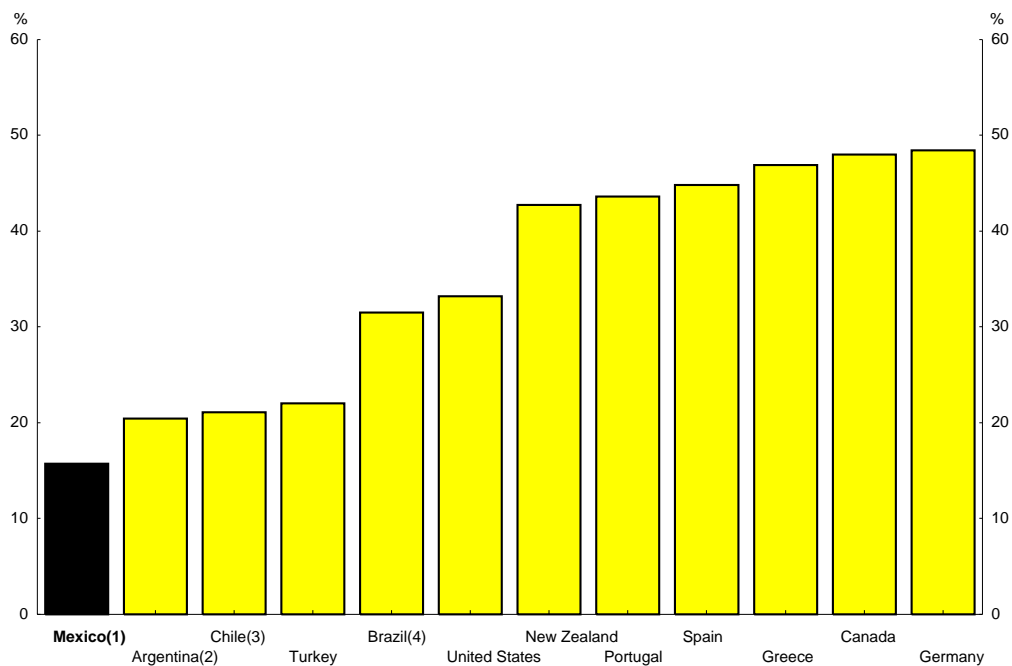
1. General Government, including social security contributions. 1996 or nearest year available.

* Mexico including PEMEX contributions.

** Mexico excluding PEMEX contributions.

Sources: OECD, *Revenue Statistics* ; IMF, *Government Finance Statistics Yearbook*, 1995 and 1996 issues.

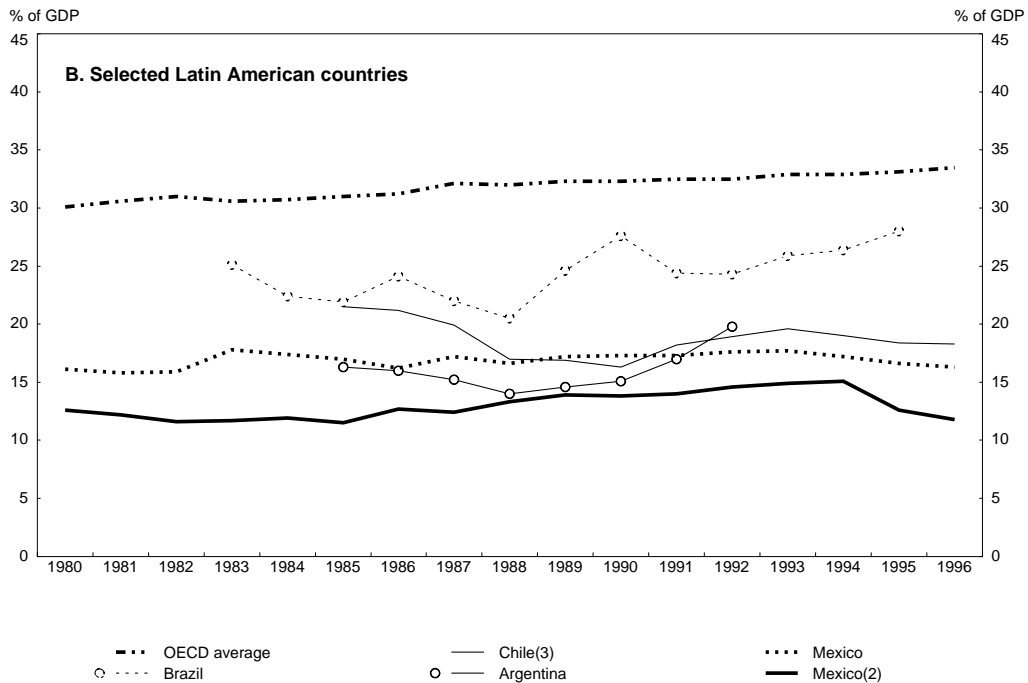
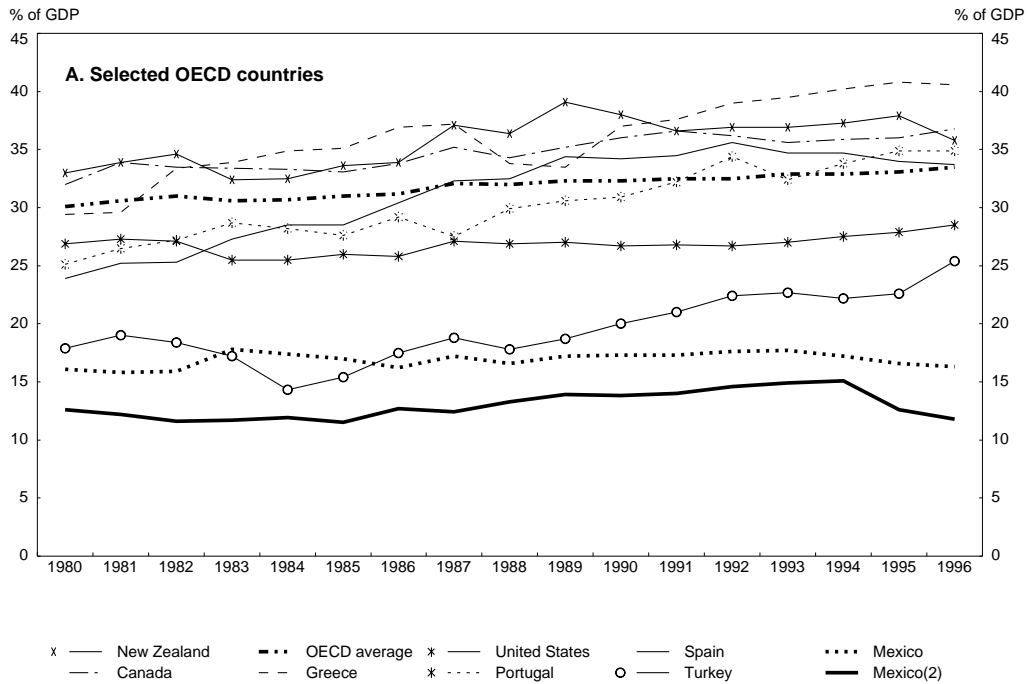
Figure 2. GENERAL GOVERNMENT EXPENDITURE - AVERAGE 1990-1996
As a percentage of GDP



1. Mexico: federal government only.
2. Argentina: average for years 1990 to 1992.
3. Chile: central government only.
4. Brazil: average for years 1991 to 1995.

Sources: OECD, *Economic Outlook*, *Economic Surveys* various issues ; IMF, *Government Finance Statistics*.

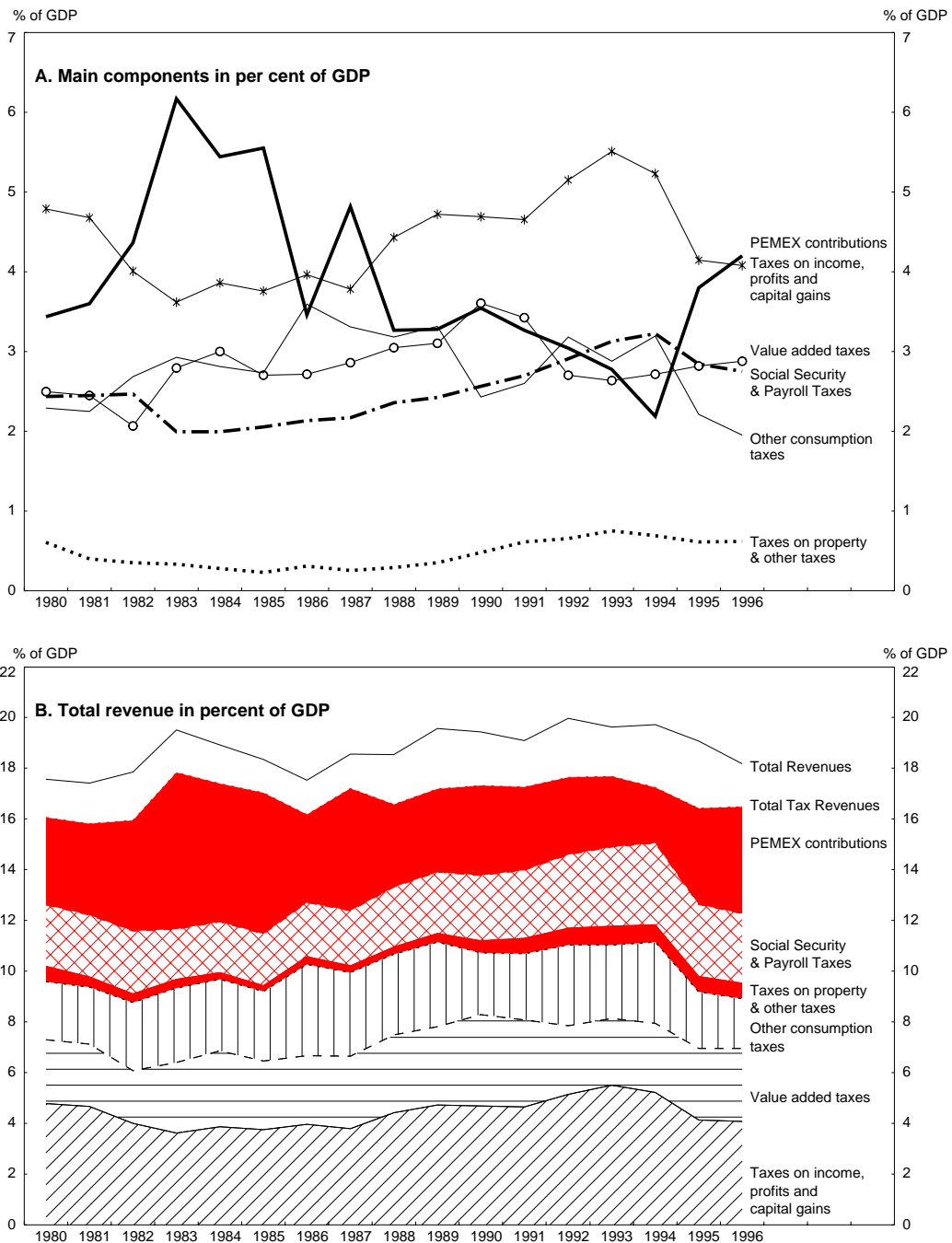
Figure 3. TOTAL TAX REVENUES (1)
As a percentage of GDP



1. General Government, including social security contributions.
2. Mexico, excluding PEMEX contributions.
3. Chile - Central Government only.

Sources: OECD, *Revenue Statistics* ; IMF, *Government Finance Statistics*.

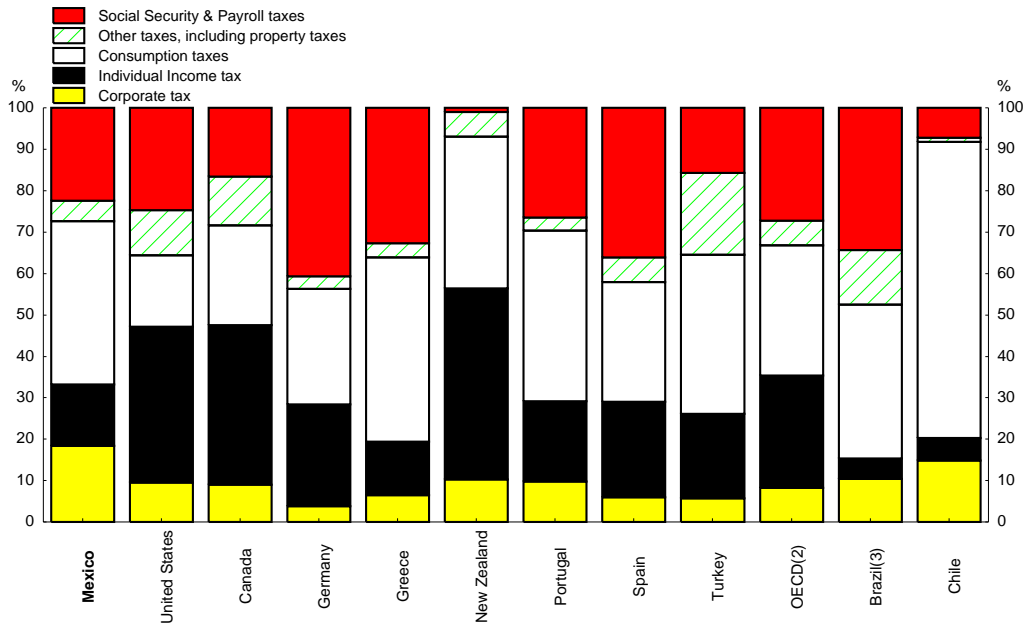
Figure 4. TAX MIX IN MEXICO, 1980-1996 (1)



1. General Government.

Source: OECD, *Revenue Statistics*.

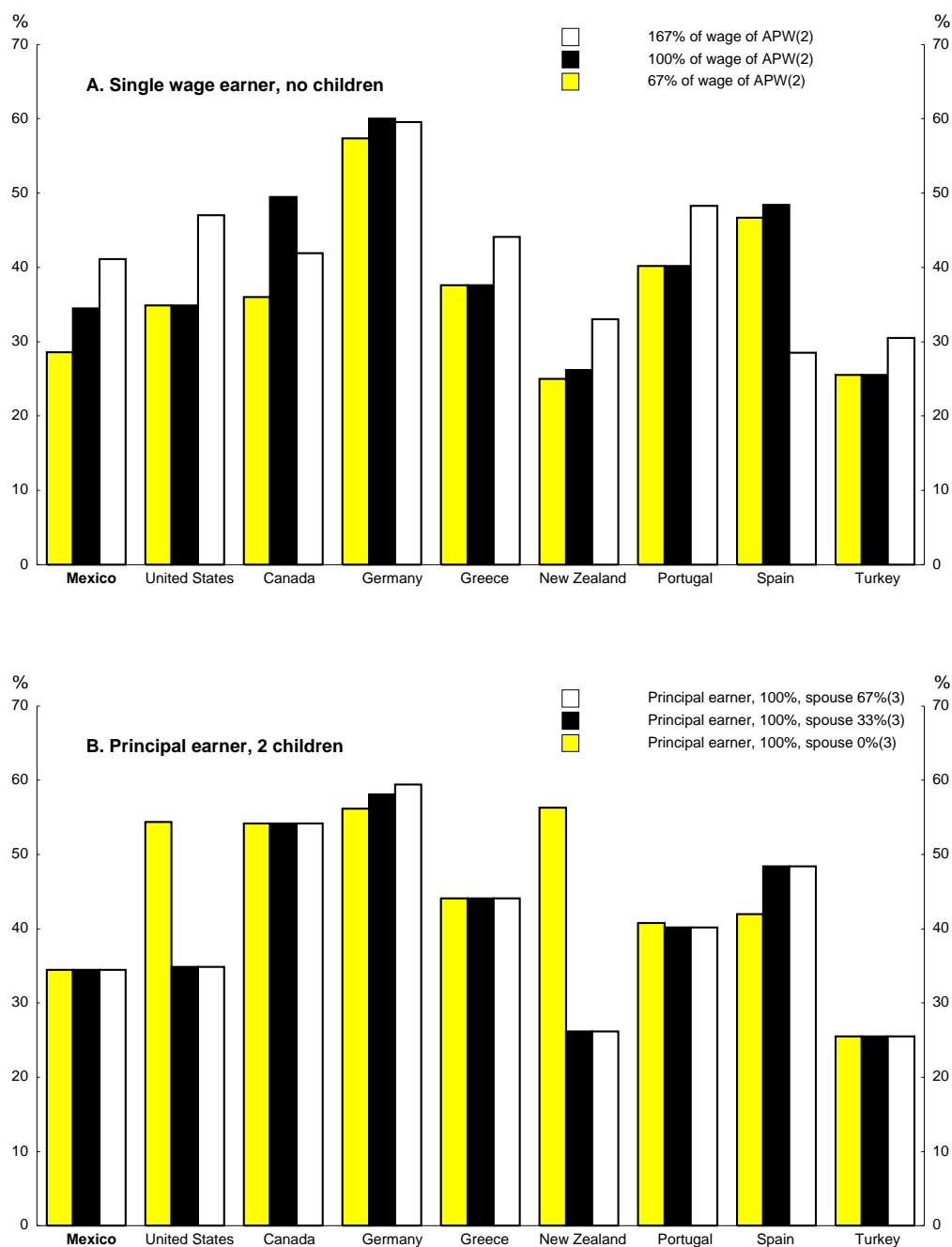
Figure 5. TAX MIX IN SELECTED COUNTRIES, 1996 (1)



1. General government. Contributions from fiscal monopolies are not included (i.e. PEMEX contributions are excluded for Mexico).
2. Unweighted average.
3. Figures for Brazil are for 1995.

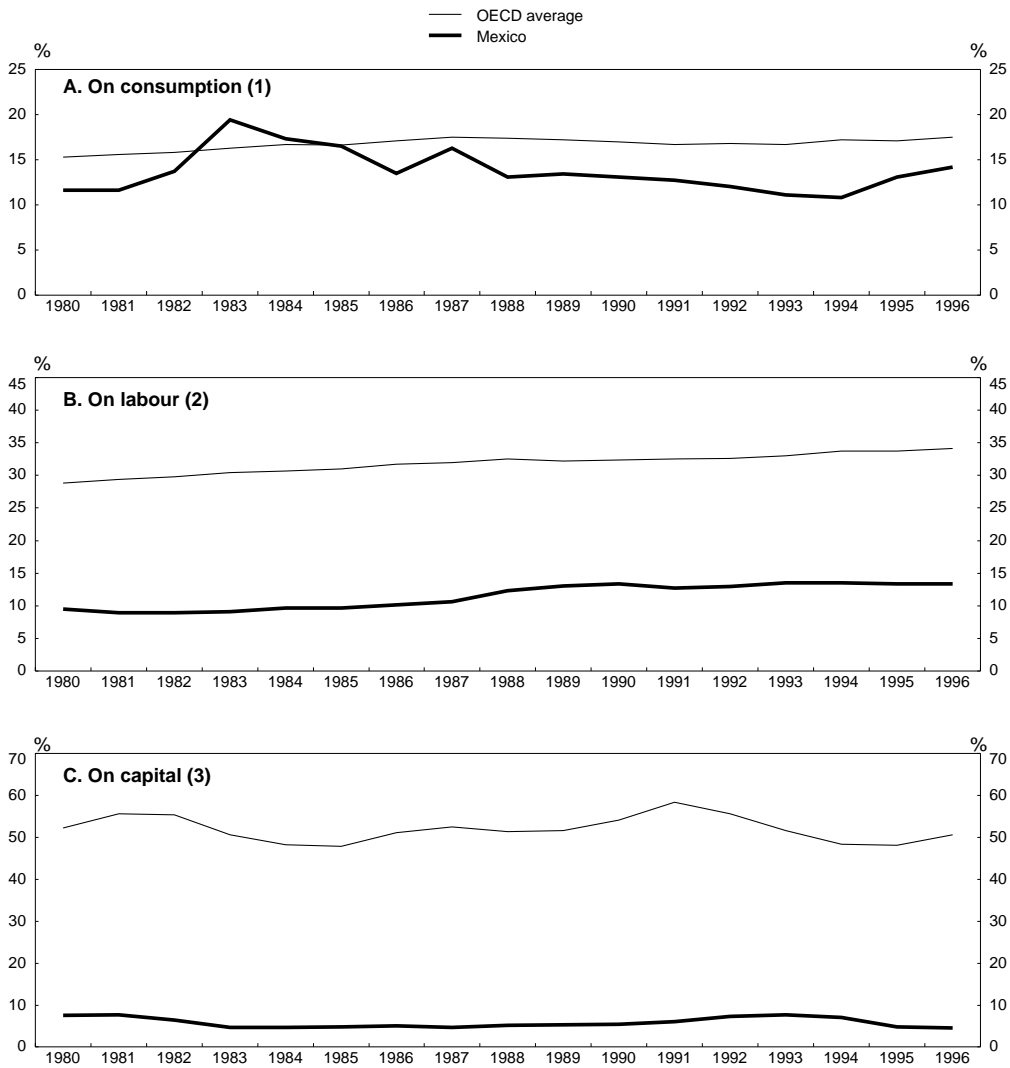
Sources: OECD, *Revenue Statistics* ; IMF, *Government Finance Statistics*.

Figure 6. MARGINAL TAX WEDGES BY FAMILY TYPE AND WAGE LEVEL, 1996 (1)



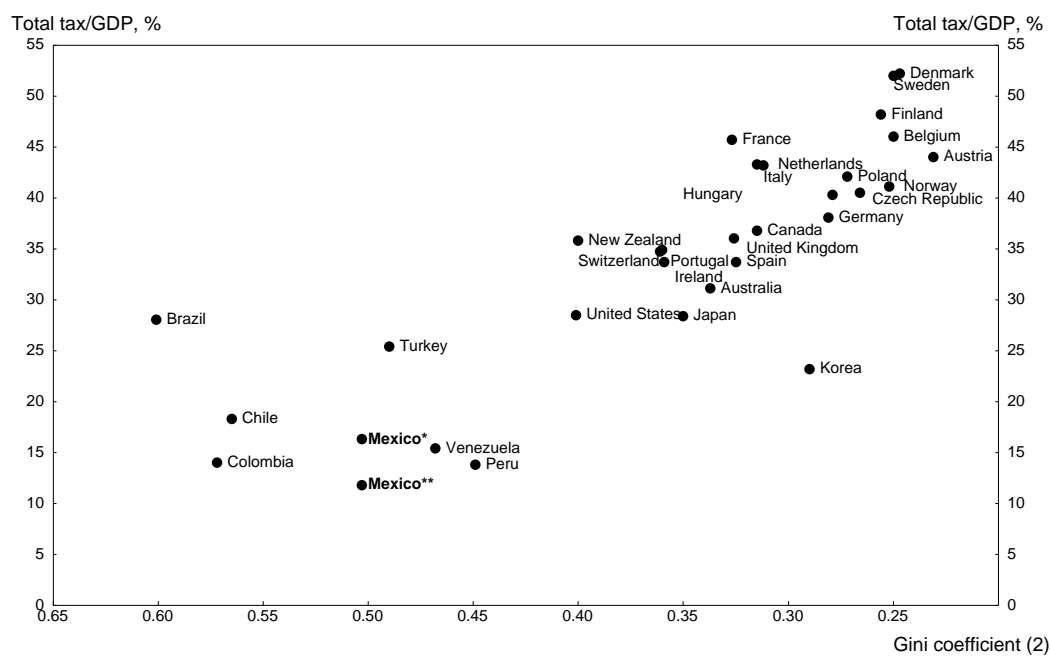
1. Marginal tax rates covering employees's and employer's social security contributions and personal income tax, with respect to a change in gross labour costs.
2. APW: Average production worker in manufacturing.
3. Refers to proportion of wage of APW.

Figure 7. AVERAGE EFFECTIVE TAX RATES



1. General and specific taxes on goods and services *plus* excises, divided by private and government consumption excluding these taxes.
 2. Individual income taxes paid on wages (including tax on self-employed labour income) *plus* payroll taxes and social security contributions, divided by wages and salaries (including imputed wages of self-employed), and including employer's contribution to social security and to private pension schemes.
 3. Individual income taxes paid on self-employment and property income received by households *less* imputed wages, *plus* corporate taxes and taxes on property divided by the net operating surplus of the economy *less* wages for self-employed.
- Sources: OECD, *Revenue Statistics*, *National Accounts*, OECD Secretariat's calculations.

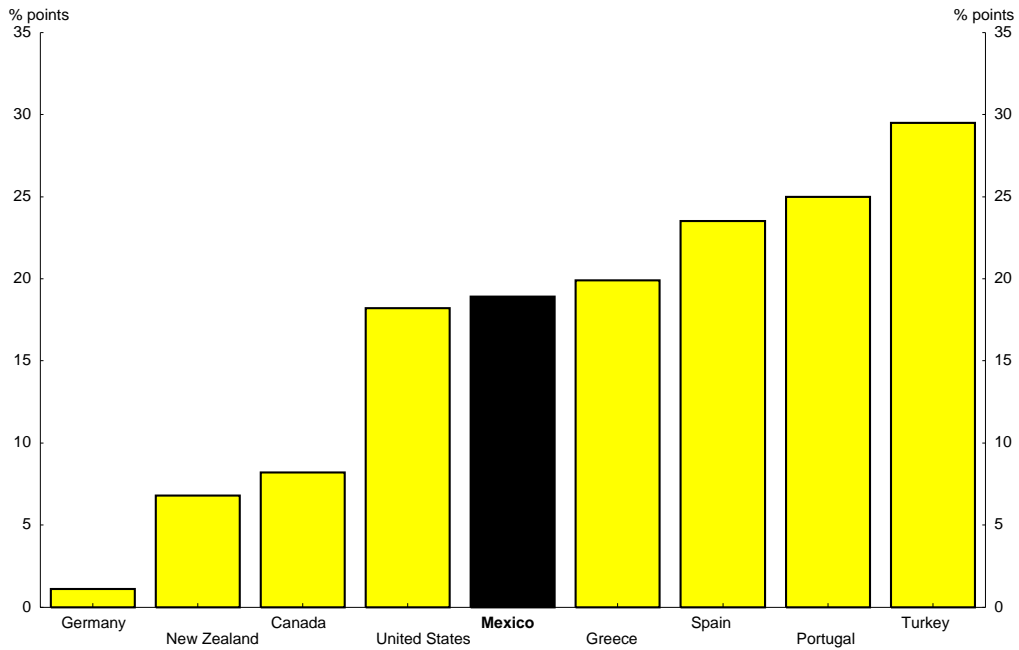
Figure 8. TAX REVENUES AND THE DISTRIBUTION OF INCOME AFTER TAX, 1996 (1)



1. General Government, including social security contributions. 1996 or nearest year available.
 2. The Gini coefficient is a measure of income inequality: the higher the coefficient, the wider the income distribution.
- * Mexico including PEMEX contributions.
 ** Mexico excluding PEMEX contributions.

Sources: OECD, *Revenue Statistics*; IMF, *Government Finance Statistics Yearbook*, 1995 and 1996 issues.

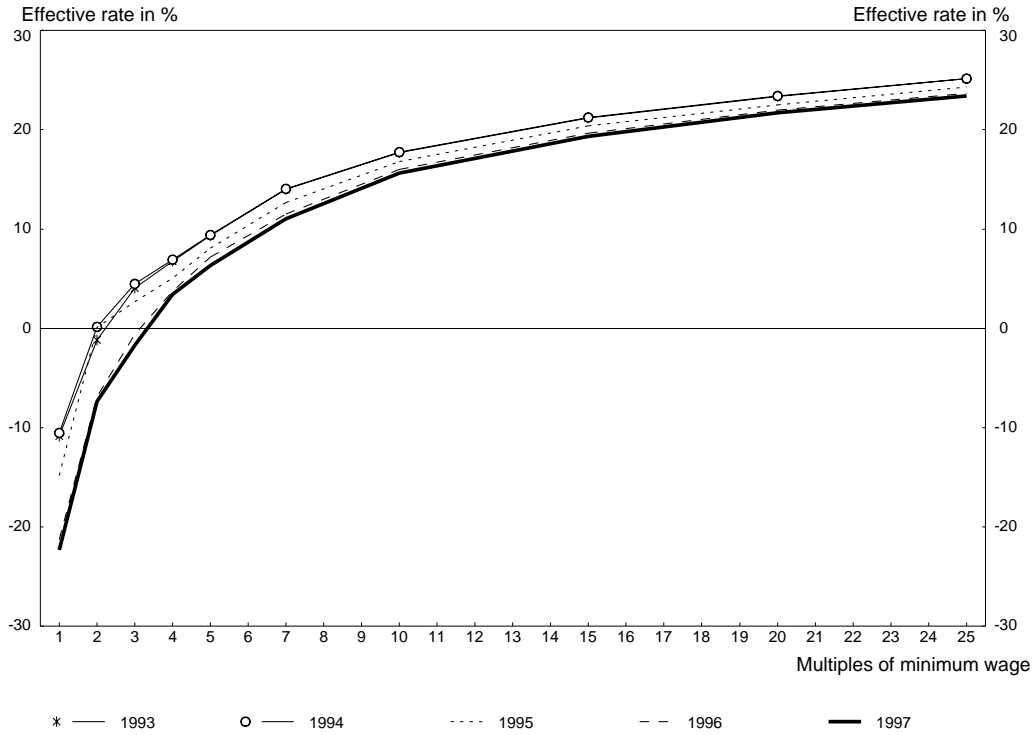
**Figure 9. OVERALL PROGRESSIVITY OF INDIVIDUAL INCOME TAX SYSTEMS
IN SELECTED OECD COUNTRIES (1), 1996**



1. Progressivity is measured as the difference between the top marginal personal income tax rate (including social security contributions) and the average statutory tax rate for an average production worker.

Source: OECD, Tax Database, *Tax/Benefit Positions of Employees*, Tax Equations and OECD secretariat's calculations.

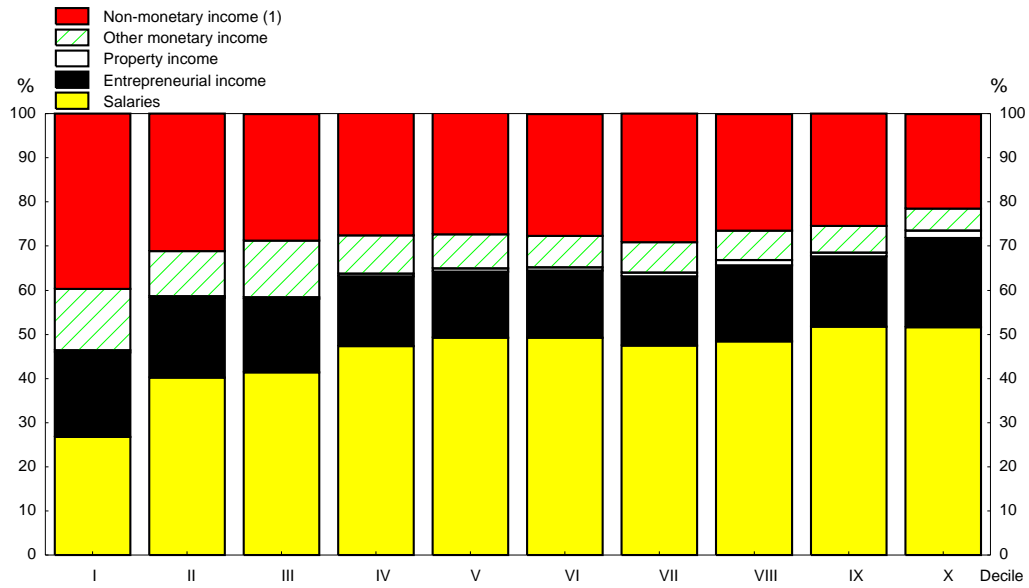
Figure 10. THEORETICAL EFFECTIVE TAX RATES FOR DIFFERENT LEVELS OF INCOME (1)



1. Statutory tax rate stemming from the combined effects of the income tax schedule, the fiscal subsidy, the tax credit and assuming fringe benefits are one third of total remunerations for all income levels.

Source: Ministry of Finance.

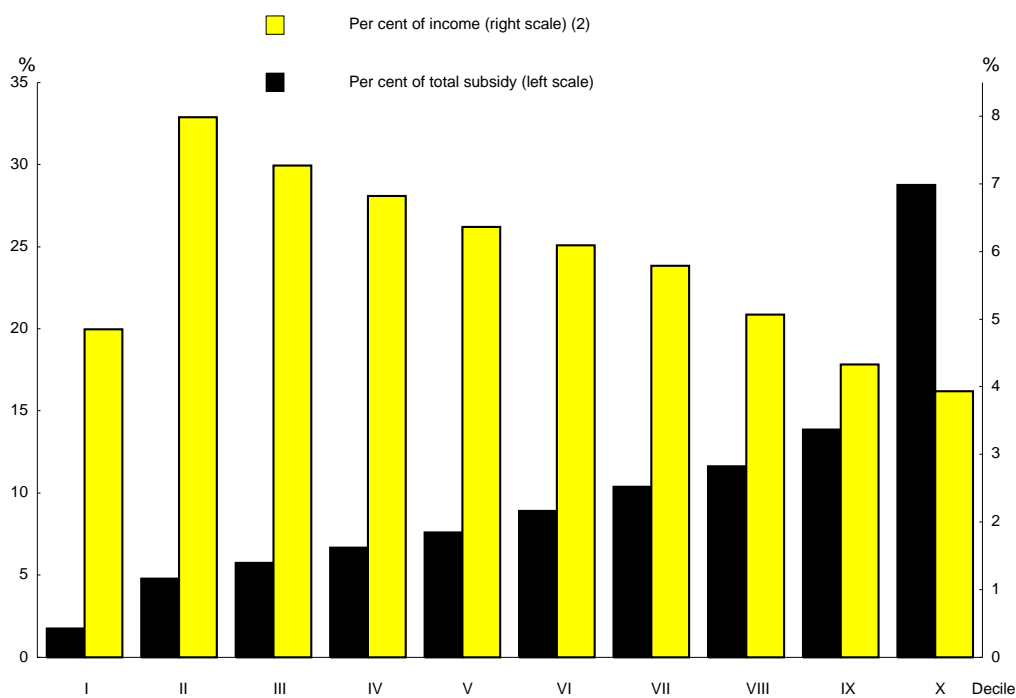
Figure 11. INCOME SOURCES BY DECILE, 1994



1. Including consumption of self-production, imputed rent of owner-occupied housing, etc.

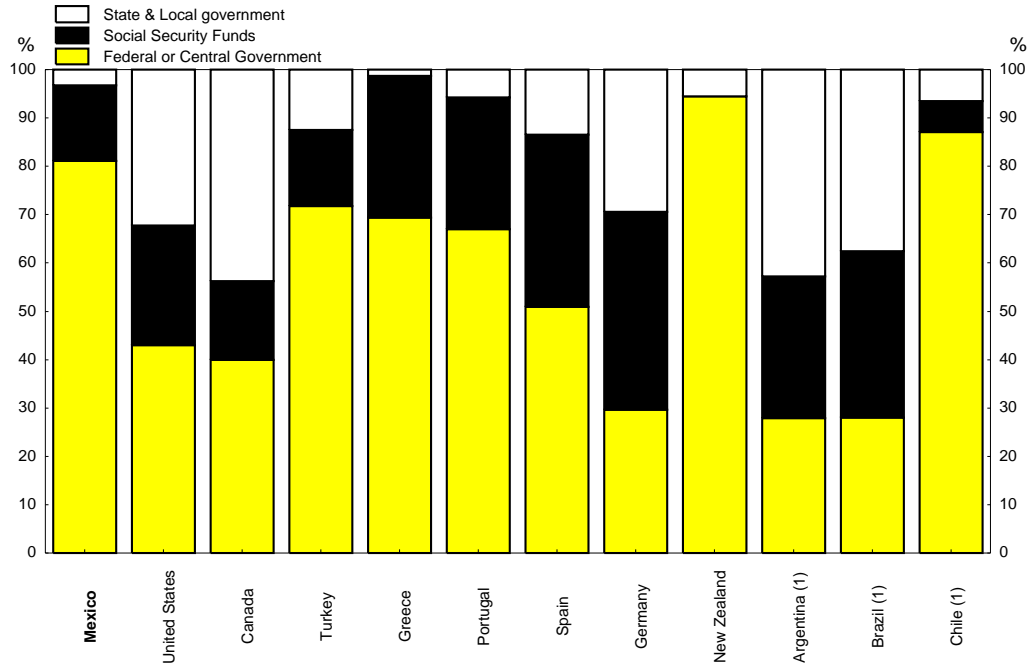
Source: INEGI, *Encuesta nacional de ingresos y gastos de los hogares 1994*, México, 1995.

Figure 12. DISTRIBUTION OF IMPLICIT VAT SUBSIDY, 1996 (1)



1. The implicit VAT subsidy at each income decile is estimated by total expenditure on food multiplied by the standard VAT rate of 15 per cent. The consumption of food is approximated from total household expenditure according to the 1996 household survey and the relative weight on food and non-food per decile from the 1994 survey. The estimate of subsidy does not consider substitution effects between consumption and savings or within the consumption basket when prices changes.
 2. Income per decile is from the INEGI 1996 Household Survey.
- Sources: INEGI, *Encuesta nacional d'ingresos y gastos de los hogares 1994 and 1996*, México ; OECD secretariat's calculations.

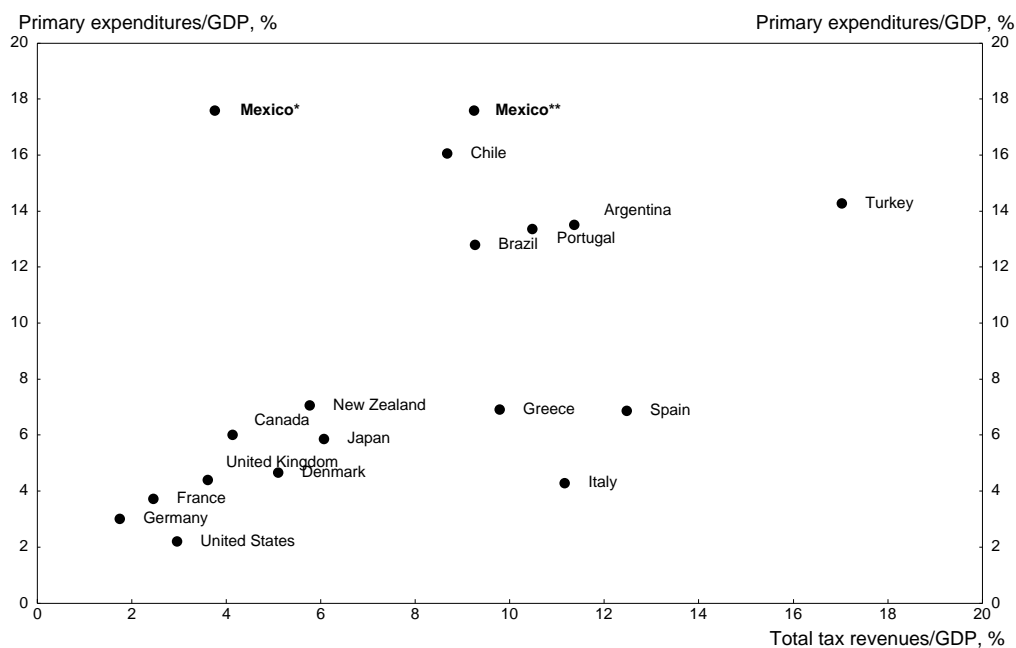
Figure 13. TAX COLLECTION BY LEVEL OF GOVERNMENT IN SELECTED COUNTRIES, 1996



1. Data for Argentina refer to 1992, data for Brazil and Chile refer to 1995.

Sources: OECD, *Revenue Statistics* ; IMF, *Government Finance Statistics*.

Figure 14. COEFFICIENT OF VARIATION IN TAX REVENUE AND PRIMARY EXPENDITURES (1)
As a percentage of GDP



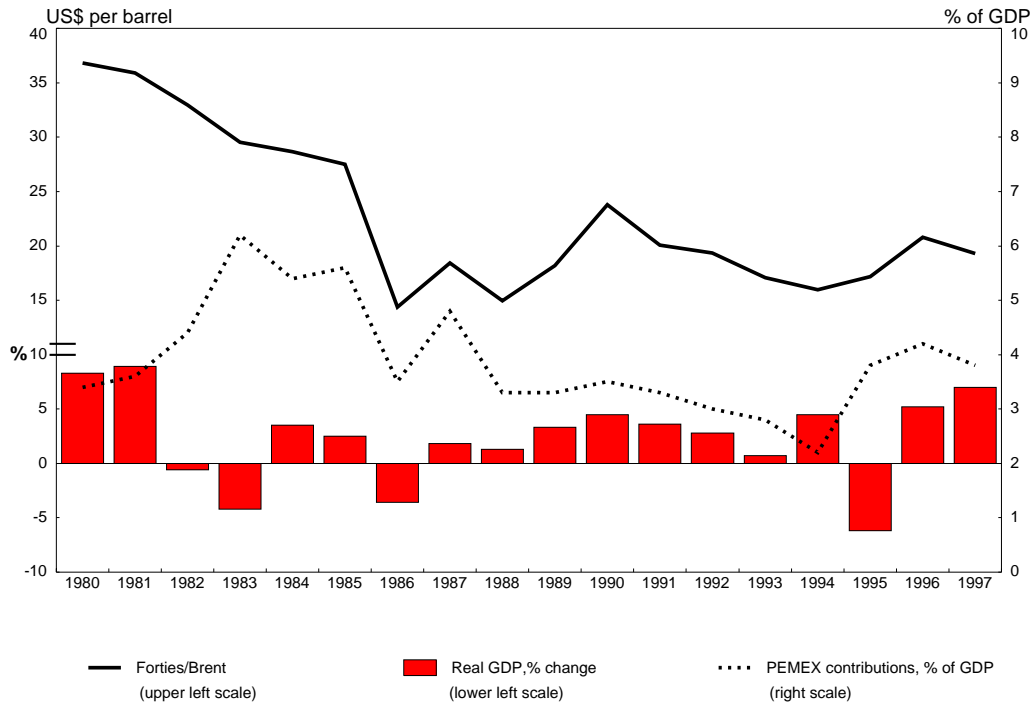
1. The coefficient of variation is the standard deviation divided by the average of the tax/GDP ratio (including social security contributions) and primary expenditures in per cent of GDP of general government (Mexico is federal government only). Sample period is 1980 to 1996 for all countries except Argentina (1985 to 1992), Chile (1985 to 1994 for primary expenditures, 1985 to 1996 for tax revenues - figures for central government only), and Brazil (1983 to 1993 for primary expenditures and 1983 to 1995 for tax revenues).

* Total tax revenues including PEMEX contributions.

** Total tax revenues excluding PEMEX contributions.

Sources: OECD, *Revenue Statistics*, Analytical Data Bank ; IMF, *Government Finance Statistics* ; OECD Secretariat's calculations.

Figure 15. OIL REVENUES, OIL PRICES AND REAL GDP GROWTH (1)



1. The reference oil price is a continuous series based on Forties (1980 -1984) and Brent (1985 -1997).
 The Mexican oil price is lower than the world reference price but shows broadly identical fluctuations.
 Sources:OECD, *Revenue Statistics* ; Banco de Mexico ; British Petroleum.

Annexes

- Annex I. Summary of tax reform measures, 1987-98
- Annex II. Main issues in the tax mix discussion in OECD countries in the 1990s
- Annex III. The statutory tax regime, 1998

List of annex tables

- A1. Main features of the tax system, 1998
- A2. Rates and structure of income tax on individuals, 1998
- A3. Statutory rates and rules for taxation of corporations, 1998
- A4. Main features of VAT systems in selected countries, 1997

Annex I

Summary of tax reform measures, 1987-98

Taxation of personal income

- 1988 Reduction of the number of brackets from 15 to 12. Reduction of maximum tax rate from 55 to 50 per cent. Indexation of brackets to minimum wage⁵⁹. Exemption of vacation bonuses and profit sharing from taxable income (up to 15 times the minimum wage)⁶⁰.
- 1989 Introduction of tax credit to replace flat deduction. Reduction of maximum tax rate from 50 to 40 per cent.
- 1990 Reduction of maximum tax rate from 40 to 35 per cent. Introduction of inflation adjustment of tax brackets.
- 1991 Introduction of a tax discount (subsidies) in inverse proportion to the share of fringe benefits in total payroll.⁶¹ Reduction of the rate charged on interest income of individuals.
- 1995 Tax credit increased for lower income brackets. Optional simplified rate (2.5 per cent) for street vendors created.
- 1997 Increased exemptions and tax credits to low income earners.
- 1998 Creation of a new regime for small taxpayers in order to combat fraud, to replace previous regimes (except that applying to primary sectors). For taxpayers with entrepreneurial activities earning less than 2.2 million pesos, the marginal tax rate on gross income varies from 0.25 to 2.5 per cent, after a deduction of three times the minimum wage.

59. Indexation to the minimum wage implies some drift since minimum wage adjustments are systematically lower than inflation.

60. The exclusion of fringe benefits from the taxable basis was followed by a gradual increase in this component of income, to about one-third of the employers payroll (Francisco Gil Diaz, 1995).

61. The coefficient of subsidy is calculated at the level of the employer, not by worker. This measure has lowered effective marginal tax rates by significant amounts -- by some estimates by as much as 50 per cent (Francisco Gil Diaz, 1995).

Taxation of corporate income

- 1989 Tax base is fully adjusted for inflation, following a transition period. Corporate tax rate is lowered from 42 to 35 per cent.
- 1990 Introduction of the simplified tax regime for small taxpayers and specific sectors (regardless of size) replacing special tax bases.
- 1991 The special tax rate on income derived from the agriculture, livestock, fisheries and forestry sectors -- both corporate and personal -- is reduced to 50 per cent of normal tax rate (instead of 40 per cent previously)⁶². Fiscal losses can be carried forward over ten years (instead of five previously).
- 1994 Reduction of marginal tax rate from 35 to 34 per cent.
- 1995 Simplified tax regime is expanded by raising maximum income of firms eligible for the programme. Deductions for investment and R&D are increased; and depreciation rates are accelerated.
- 1997 Tax payment restructuring for firms facing liquidity problems. Tax arrears are partly forgiven and partly re-negotiated at more favourable terms.⁶³
- 1998 Measures to promote long-term savings are introduced, including through employees' individual retirement accounts.

Asset tax

- 1989 Introduction of the asset tax at a 2 per cent rate (not applicable for the first three years after company starts operating). Asset tax is refunded against income tax -- excess is carried forward for three years.
- 1990 The asset tax rate is reduced to 1 per cent for taxpayers who benefit from the reduced income tax rate regime (applying to the primary sector). Consolidation of asset tax introduced.
- 1991 The number of years over which asset tax refund is possible increases from three to five years.
- 1992 Exemption for street vendors who pay income tax under specific regimes (10 per cent of their purchases). Special, more favourable, regime created for the hotel sector.
- 1994 The number of years over which asset tax refund is allowed increases from five to ten years.
- 1995 Tax rate lowered to 1.8 per cent. New enterprises exempt for three years. Established firms with qualifying investment programmes can defer payments for four years.

62. The tax rates are reduced by 75 per cent if taxpayers from these sectors put their production through industrial processing.

63. This measure should be seen in the context of a general effort to alleviate debtors' problems in the aftermath of the peso crisis, to prevent the development of a widespread non-payment culture.

- 1996 Income below 7 million pesos exempt. Investment and employment creation incentives are introduced for one year.⁶⁴
- 1997 Widening of the tax to include most financial institutions (except for assets used in intermediation operations). Income below 8.9 million pesos exempt. Investment and employment creation incentives extended for one year.
- 1998 Investment and employment creation incentives were not extended.

Value added tax

1988-92 A number of changes in VAT rates and structure are introduced.

- 1992 General VAT rate lowered from 15 to 10 per cent and the special border rate raised from 6 to 10 per cent.
- 1995 General tax rate is raised from 10 to 15 per cent, except in border areas, where it remains at 10 per cent.
- 1996 Widening of the zero rate to include potable water, processed food items and medicines, at all stages of production. VAT applies only to real interest (instead of nominal previously) on consumer credit and credit card loans.

Car taxes

- 1987 Five tax rates are established on the sale of new cars, depending on the price of vehicle.
- 1989 Reduction of rates; limits are introduced on deductibility for businesses.
- 1990 Full deductibility is re-established for cars purchased by businesses.
- 1991 Tax rates on ownership and use of cars established at 2.0, 5.0 and 8.5 per cent.
- 1992 Tax rates on ownership and use of cars raised to 2.5, 6.5 and 10.0 per cent.
- 1997 Tax on new cars tax reduced (temporary measure applicable for one year only).

Excise taxes

- 1989 Rates reduced for tobacco and wine.
- 1993 Rates reduced for beer.

64. This measure was meant to support the economic recovery; it was extended in 1997 to boost the domestic-oriented sector.

Revenue-sharing measures

1996 Measures to introduce a new federalism

Revenue-sharing rules

The general revenue-sharing pool is increased to 20 per cent of “sharable” federal tax receipts -- 7 percentage points more than before.

The federal government will distribute 20 per cent of excise tax revenues on alcoholic beverages and beer, and 8 per cent of the tax on tobacco, directly to state and local governments.

Rescheduling of revenue-sharing transfers through the year to improve the cash flow of the lower echelons: 90 per cent of the funds are to be apportioned monthly and only 10 per cent set aside until the end of the fiscal year.

The federal government increases the proportion of bridge toll revenues to be distributed to the states and municipalities to 25 per cent of operating revenue (from 10 per cent previously). The resources may be earmarked for infrastructure and capital expenditure.

Devolution of responsibilities

Lower echelons are authorised to impose licensing fees for bars.

They are authorised to levy a tax on hospital services and on motor vehicle ownership or use. Beginning in 1997, the proceeds from the federal new car tax will be passed on to the lower echelons in their entirety.

The federal tax on the acquisition of real estate is rescinded, and the lower echelons will be authorised to impose it.

1997 Lowering of federal tax rate on lotteries (from 21 to 15 per cent); states can levy a 6 per cent tax on the same basis. Under an administrative co-operation agreement, the states are authorised to administer a number of federal taxes. This is an incentive for improving their collection capability insofar as they may keep any additional taxes imposed as a result of the tax audits they conduct (this being applicable to income tax, assets tax, excise tax for small taxpayers and VAT).

*Annex II***Main issues in the tax mix discussion in OECD countries in the 1990s**

41. The role of the tax system is to allow the Government to fulfil its inter-temporal budget constraint by generating the necessary revenues as efficiently, equitably and manageably as possible.⁶⁵ This implies that taxation should minimise disincentives to work, invest and save; that horizontal equity should be observed and vertical equity taken duly into account;⁶⁶ and that tax laws and regulations should not be unduly complex and difficult to enforce by the authorities. While these broad guidelines constitute a set of “first principles” for taxation, there is more ambiguity when it comes to practice. In theory the least distortionary tax is a lump-sum tax where each individual pays the same amount in tax. This raises problems with respect to vertical inequality as well as generating sufficient revenue. Most general equilibrium models imply that consumption taxation is less distortionary than income taxation (because consumption taxation can be viewed as a proportional tax on lifetime income or intergenerational income, that does not distort inter-temporal decisions, *i.e.* savings and investment). However, this again generates concerns of vertical inequality and possibly also compliance because the revenue-neutral rate is likely to be very high for most OECD-countries. Another issue is whether incomes from different sources should be taxed at rates according to the elasticity of the bases (Ramsey optimality) or whether a single rate schedule should apply to aggregate income independent of source (the Shantzi-Haig-Simons principle). In practice, it is hardly possible to identify and implement such a thing as an “optimal tax system” and the exact design of the tax system will be influenced by a host of idiosyncratic, and often interrelated, features of the individual countries -- such as the income level and distribution, regulation and flexibility of labour and product markets, relative magnitude of distortions from different taxes and their impact on economic activity and/or social welfare, industrial structure, considerations on tax competition and political preferences for government expenditure levels. Moreover, the overall political context is of course decisive for the design of the tax system as are the administrative capacities in place.

42. The issue of overall tax mix is perhaps the most fundamental problem in the design of tax systems. There has been considerable convergence in tax mixes in the OECD, but large differences among countries remain. Generally, the broad thrust of tax reforms have involved an increase in direct labour taxation in the form of social security taxation, a decrease in both statutory and average effective rates of corporate tax, and a shift in consumption taxes away from excise taxes and toward value added taxation. There has also been a slight increase in the use of environmental taxes, especially in Europe. These changes seem to have been driven by two considerations. First, there was a desire to reap efficiency gains from the reform of tax systems. Clearly, the priority assigned to finding less distorting ways of levying taxes had to increase as tax burdens themselves increased in the OECD. A second consideration was undoubtedly globalisation, as these reforms tended to lower marginal rates on more mobile tax bases (and, hence, on those with more elastic responses to taxation) and to raise them on less mobile tax bases. In this

65. See for instance Goode, 1984.

66. Horizontal equity refers to a situation in which people with the same level of income are taxed at the same level. Vertical equity implies that tax payments are increasing in income.

sense, then, the reforms corresponded to a standard principle for the design of tax systems -- that tax distortions are minimised if the burden is focused on tax bases that respond relatively little to taxation. At the same time, though, this shift in tax mix gives rise to fairly serious concerns for distribution and tax equity. Some of the main themes of the tax structure discussion among OECD countries are summarised below.

43. First, there has been some advocacy for a move from income taxation to general consumption taxes (VAT). This would reduce tax disincentives on inter-temporal decisions (*i.e.* savings and investment). Moreover, consumption taxes are generally less easy to avoid for the underground/informal economy. However, consumption taxes tend to be less progressive than income taxes, they may distort consumption patterns if rates are not uniform, or some goods and services are exempted, and taxpayer resistance is often significantly biased against consumption taxes (Messere, 1993). Moreover, such a shift would also have generational distributional consequences in favour of the younger generations during the transition since people with assets accumulated under the income tax regime would essentially "pay twice" as they consumed these assets under the consumption tax regime.

44. Second, a measure which has attracted significant attention in Europe is a switch from payroll taxes to VAT (see for instance OECD, 1995). This is particularly attractive to countries where payroll taxes have been high and increasing and where labour market arrangements convert part of the incidence of this tax into unemployment.⁶⁷ The effect of such a measure would be to shift some of the tax burden to those outside the labour force (*i.e.* receivers of capital and transfer incomes), thus reducing the disincentive for employers to take on labour -- especially low-skilled and part-time employed to the extent social security contributions are levied from the first unit of income earned and reduced above certain ceilings. A variant of this proposal has focused on a shift from labour to energy taxes, in which case some of the tax burden could (but not necessarily) be shifted to energy consumers and producers. A number of countries have already experimented with such taxes (Belgium, Denmark, Finland, Netherlands, Norway, Sweden, and the United Kingdom). The few empirical studies of such measures suggest that the employment impact of such measures is extremely small.

45. One difficulty encountered in implementing policies that shift the tax burden onto transfer recipients is in reducing the standard of living of those receiving transfer payments. If they are fully compensated for the tax-induced increase in prices, then the scope for tax cuts on labour is much reduced. Moreover, such a shift might only have marginal effects on labour supply decisions to the extent these depend on the total tax burden of a household (*i.e.* including consumption taxes), cf. Layard *et al.* (1996). It has also been argued that such a shift might -- at least in the short term -- improve wage-competitiveness since VAT but not payroll taxes are rebated at frontiers. Although true, especially for countries with fixed exchange-rate regimes and slow wage adjustment, such temporary arguments should not, by themselves, validate adjustment to tax regimes.

46. Third, the links between benefits and tax systems have been widely analysed, in particular the existence of so-called poverty or unemployment traps in which low-income households face very high marginal effective tax rates when moving up the income ladder, or taking on work. In fact, marginal effective tax rates, while having generally been lowered for high incomes, have barely moved, or in several countries even increased for low-income taxpayers during the past two decades. However, as noted by the *Implementing the OECD Jobs Strategy (1997)*, marginal effective tax rates for low incomes have been reduced during the 1990s in several countries including France, the United Kingdom, Canada, Denmark, Iceland, Ireland, the Netherlands, New Zealand and Sweden. Measures to reduce poverty or unemployment

67. Although the incidence of social security contributions depends on the degree of labour-market flexibility, there is some empirical evidence that these taxes have a larger effect on employment than other taxes, cf. the *OECD Jobs Study (1994)*.

traps through the use of employment conditional benefits were introduced or expanded in the United States, the United Kingdom, Canada, Australia, Ireland and New Zealand. The same has been the case for Mexico with the introduction in 1994 -- later expanded in 1995 -- of a progressive salary tax credit.

47. Fourth, in a few countries, a move from employees' social security contributions towards an income tax has been advocated even though the proceeds may still be earmarked for social welfare benefits. The argument here is between those who regard social security contributions as insurance, and those who regard them as a regressive form of taxation, with flat rates, low ceilings and no allowances for family circumstances. In most OECD countries, the link between contributions and benefits is at best tenuous, and social security is *de facto* no more than a tax on labour. France and Sweden have recently reduced payroll taxes within an unchanged overall tax wedge of labour income. In Mexico, the social security reform also draws in this direction (1998, *Economic Survey of Mexico*).

48. Fifth, a general switch from mobile to immobile tax bases is being widely considered, as trade- and capital-market liberalisation increases the potential for tax competition between countries. The trade-off will be to what extent higher marginal tax rates on relatively immobile factors can replace taxes on mobile factors, thereby safeguarding domestic revenues, without causing excessive distortions in the supply and demand of the immobile factor. Up until now, there has been little evidence, that increasing globalisation and tax competition have had much influence on domestic tax profiles (leaving aside the European Union, where a substantial convergence has taken place in indirect taxation due to the gradual implementation of the single market).

*Annex III***The statutory tax regime, 1998⁶⁸**

49. Income from individual non-business activities is taxed at rates ranging from 3-35 per cent (Table A1). The statutory rates, both at the bottom and at the top, are lower than found in most other OECD country.⁶⁹ Income brackets are indexed to inflation on a semi-annual basis. In contrast with many other OECD countries, Mexico does not apply a zero-rated band for low incomes (Table A2). However, a basic allowance is given for holiday bonus and end-of-year bonus. Moreover, a salary tax credit implies that low-income earners pay negative taxes. Non-standard deductions include medical expenses, school transportation, funeral charges, charitable donations and voluntary contributions to pension schemes (up to a certain limit). Imputed rental income from owner occupied housing is not taxed, while interest expenditure, including on housing, are not deductible for individuals. Positive real interest income is taxed at a rate of 17 per cent, which applies only up to the first 10 percentage points of interest and only for financial instruments with less than one year's maturity. Exempt from tax is interest income from government securities and several other instruments. States and municipalities are not allowed to tax income, but states can levy payroll taxes.

(Table A1. Main features of the tax system, 1998)**(Table A2. Rates and structure of income tax on individuals, 1998)**

50. The social security system has been fundamentally reformed in recent years. The pension scheme is being transformed from a pay-as-you-go system into a fully funded system and the financing of health insurance is being changed so as to reduce labour taxation, increase the financial viability of the system and make affiliation to social security more attractive for the uninsured population in the informal sector.⁷⁰ The new pension system strengthens the link between workers' contributions and benefits, which reduce incentives for workers to evade or under-declare income. In addition to mandatory contributions, workers can make voluntary deposits on their accounts, and the government pays a fixed contribution. The financing reform of the health insurance increases contributions from general taxes, while lowering the share of social security contributions (except for low incomes) and their marginal rates (Table A1). This

68. A detailed overview of the Mexican tax system in 1998 is presented in Table A1.

69. Switzerland has lower rates at the central government level, but not when taking local government income taxes into account. New Zealand has a lower top rate, *i.e.* 33 per cent.

70. More details are given in the 1998, *Economic Survey of Mexico*.

could alleviate problems of under-reporting of income⁷¹ and might also facilitate the integration of workers from the informal to the formal sector as payroll taxes fall most heavily on low-paid and part-time workers (OECD, 1998).

51. Corporate income is taxed at a uniform rate of 34 per cent -- roughly in line with most other OECD countries (Table A3) and lower than in the United States and Canada. As in the individual income scheme, corporate income is fully indexed for the effects of inflation. Besides income tax, Mexican enterprises have to pay into a so-called profit sharing scheme by which 10 per cent of after-tax profits from the previous year is distributed to workers.⁷² Depending on the incidence, this could raise the effective corporate income tax rate by up to 10 percentage points (*i.e.* from 34 to 44 per cent).⁷³ Such schemes are not used in other OECD countries. Mexico has recently implemented the OECD guidelines for transfer pricing, and have also applied a set of specific rules for operations with residents in tax havens. Dividends are taxed at the corporate level, but individuals may choose to have dividends taxed in the individual income scheme (grossed up by a factor of 1.515) and credit the tax paid at the corporate level. No double taxation of dividends thus takes place, thereby ensuring an equal treatment of corporate financing through new equity or retained earnings. Compared to almost all other OECD countries, the wedge on dividends -- *i.e.* the difference between gross earnings at the corporate level and net "take-home" dividend for the individual share-holder -- is correspondingly low in Mexico (Table A3). In accordance with the integration of individual and corporate taxation, self-employed are free to choose between the individual and corporate income scheme.

(Table A3. Statutory rates and rules for taxation of corporations, 1998)

52. In order to improve compliance of corporate taxation, a net worth tax ("asset tax") was introduced in 1989, whereby net assets are taxed by a flat rate of 1.8 per cent at present. The asset tax is creditable against income taxes paid, and the purpose of the tax is primarily to limit income-tax avoidance -- for instance, through transfer pricing or overstatement of costs -- by imposing a minimum tax on corporate activity above a certain threshold. The rationale for using an asset tax, as opposed to, for instance, a lump-sum tax, is that assets in principle reflect the earnings capacity of a company. From an administrative point of view, companies have less incentive to under-report investment, as compared to income, as this would have negative consequences for their depreciation allowances. The current tax rate of 1.8 per cent assumes that the annual real return to private capital should exceed 5.3 per cent on average. If this is the case, the assets tax does not distort investment incentives (because the income tax generated would exceed the asset tax) -- and a lower rate of return would, in any case, indicate an inefficient use of the assets. The assets tax thus encourages an efficient capital allocation. The assets tax has been highly criticised by the business sector, not least because it applies in years when firms are making losses,⁷⁴ but

-
71. IMSS registers show that in 1993 one out of five workers were contributing to IMSS on the basis of earnings of one minimum wage or less, while according to the national Employment Survey only one out of 40 workers were earning such low wages.
72. Formally, this is not a tax since it is instituted in the Labour Law rather than the Tax Laws. However, it has the same *de facto* effects as an income tax.
73. Most likely, however the incidence will be on workers, and the effective increase in the rate is likely to be significantly less than 10 percentage points. It should also be added, that the profit sharing is deductible from corporate income to the extent it exceeds fringe benefits. As these typically vastly exceeds 10 per cent of profits the effective deductibility of profit sharing is probably small.
74. However, assets taxes paid can be refunded by the amount by which corporate income tax exceeds the assets tax in any of the following ten years. Likewise the amount by which income taxes have exceeded assets taxes during the previous three years are creditable against the assets tax in a given year. New enterprises are exempt for 3 years, and enterprises with incomes below 8.9 mill. pesos (1998) are also exempt.

also because it discourages foreign investors by not allowing start-up concessions for these investors. Although it is normally not recommended to tax investment directly because of the possible adverse consequences for capital accumulation -- and, indeed, net worth taxes are only levied in a few other OECD countries (Canada, Switzerland, Finland and Iceland) -- it has a clear justification in the case of Mexico, given the administrative problems of controlling and enforcing corporate income-tax payments. One study thus concluded that every peso of assets tax collected brings in an additional 3.5 pesos of corporate income taxes, thus corroborating the important control function of the assets tax.⁷⁵ Assets taxes or net wealth taxes are also levied in a number of other Latin American countries.⁷⁶

53. Besides the general corporate tax regime, three partly overlapping preferential regimes are in place: the simplified regime for the agriculture,⁷⁷ fishery and land transportation sectors; the special rate regime for agriculture and publishing; and the small taxpayers regime. The simplified regime applies the standard corporate tax rate of 34 per cent, but calculates income on a cash-flow basis. All expenditure is thus immediately deductible (including investment in physical and financial assets), and only resources taken out of the company are subject to taxes. In practice, this leaves companies under this regime, which are typically family-run businesses, with ample room to avoid any taxation. The special-rate regime applies only half of the standard corporate tax rate, *i.e.* 17 per cent on income and 0.9 per cent on assets, on the enterprises included.⁷⁸ Finally, the small taxpayers regime includes companies with an annual gross income below 2.2 million pesos. This scheme was especially set up to encourage small firms and the self-employed to register in the formal sector and to reduce the government's administrative costs linked to these entities. Besides avoiding the complexities of the general regime, notably inflation accounting, this regime also applies lower reporting requirements. Gross income is taxed at rates between 0.25-2.5 per cent. Even though preferential regimes like the ones in Mexico are not uncommon in other OECD and Latin American countries, the economic justification for preferential treatment of certain sectors or types of enterprises are most often relatively weak. This is to a large extent the case for Mexico, where the concessions granted -- especially in terms of the simplified and low-rate regimes -- seem to reflect a favouring of political pressure groups more than profound macroeconomic and structural considerations.

54. Taxation of consumption has typically accounted for 40-50 per cent of total tax revenue (excluding royalties from PEMEX) with the sources being split almost equally between VAT revenues and other consumption taxes, mainly excises, customs and import duties. Revenues from VAT have been significantly influenced by numerous changes to the system over the years -- during the 1990s most notably the decision in 1990 to switch the VAT administration from states to the federal government, the standard rate reduction in 1992 and its reversal in 1995 (as noted in Annex I). In broad terms, the Mexican VAT system follows a set-up not very different from that of most other countries. It applies a standard VAT rate (at present 15 per cent) while having some goods and services (food, medicine, newspapers, etc.) being exempted or taxed at a lower rate, in this case zero. Furthermore, the standard VAT rate is reduced to 10 per cent in areas close to the US border. However, Mexico deviates from many other OECD countries by the amount of exemptions and zero-rated goods.⁷⁹ In most other OECD countries the lower rates are

75. Gil Diaz (1995).

76. Shome (1992).

77. Including livestock and forestry.

78. Workers in agriculture and fishery are also totally tax exempt for incomes below 20 times the minimum wage.

79. Exemptions differ from zero-rating in that businesses that sell exempt products cannot claim credit for the VAT included in their purchases (*i.e.* the VAT paid is then shifted on to consumers, and all transactions up to the exempted sale will be taxed). Moreover, if a business' sales consist exclusively of exempt commodities, it can be considered outside of the VAT chain and treated as a final consumer. Exemptions should thus be considered a superior option to zero-rating from the administrative as well as from the

applied to a much smaller variety of goods and services (Table A4). Mexico also allows wider concessions to small traders than seen in other OECD countries except for Japan. One departure in the other direction is the inclusion of some financial services, including consumer credits and personal loans, in the tax base. Overall, however, the revenues from VAT are relatively low in an international comparison -- of OECD countries applying VAT only Japan and Canada have lower revenue/GDP ratios.

(Table A4. Main features of VAT systems in selected countries, 1997)

55. The problem of exempting and zero-rating a very wide range of goods and services is not only the revenue foregone *per se* by narrowing the base, but also that it opens up multiple possibilities for non-compliance and avoidance -- for instance by falsely attributing sales to zero-rated or exempted transactions -- thus making it difficult for the tax administration to enforce the VAT-regime appropriately. This is exacerbated by the possibility for companies to get cash refunds for VAT credits. In most countries a zero-rate only applies in the export sector, and the only businesses that can be expected to systematically show tax credit in excess of tax debits are exporting enterprises. In such countries authorities often choose to make the option of VAT refunds available to exporting companies only, so as not to burden the administration with the processing and control tasks involved in refund claims. In Mexico, the economic rationale for using consumption taxes (*i.e.* they do not distort savings and investment decisions) is also diluted to the extent that different rates distort relative prices. Finally, by allowing a large spectrum of goods and services preferential treatment, pressures from rent seeking may mount as taxpayers in the ordinary regime are encouraged to also try to become exempt or zero-rated.

56. Excise taxes are based on the same system of credits, debits and reimbursements as the VAT, whereas in many other countries excises are levied only at the import - or production - point. Although technically elegant, the Mexican system is difficult to administer, which could give rise to problems of non-compliance in this system as well. Like most other countries, Mexico levy excises on fuels, alcoholic beverages, tobacco and motor vehicles. No excises are levied on environmentally damaging activities. Revenues from excises to GDP have fluctuated sharply over the 1980-96 period, with a coefficient of variation being double that of VAT-revenues to GDP. The main reason is the excise on fuel, which fluctuates inversely proportionally with the oil price. The fuel price for the final consumer at the pump is regulated by the authorities on a monthly basis (*i.e.* the price is linked to expected inflation) with the schedule being determined in the annual budget.⁸⁰ The excise is then determined residually as the difference between the regulated consumer price and the import price on oil adjusted for a mark-up and commercialisation costs at PEMEX. When market prices of oil fall, the regulated consumer price remains unchanged, and excise revenues will increase accordingly. However, the overall revenue intake will be dominated by a drop in other oil-related revenues. The revenue raised by PEMEX are described in more detail in Box 3 of the main text.

revenue viewpoints but not from a distributive viewpoint as replacing zero-rating with exemptions would increase prices for a range of basic necessities.

80. The Ministry of Finance has the option of raising the regulated price at its discretion without Congressional approval.

Table A1. Main features of the tax system, 1998

| Tax | Nature of Tax | Deductions and Exemptions | Rates | |
|------------------------------------|--|--|--|--|
| Federal taxes | | | | |
| 1. Taxes on Income: | | | | |
| 1.1. Individuals: | | | | |
| 1.1.1. Individual income tax (IIT) | <p>The IIT is levied on an individuals income from all sources, including wages and salaries, income from business activities, service fees, real property and interest. Changes in the real value of assets and liabilities due to inflation are taken into account in determining the tax base. Income also includes gains from the effect of exchange rate changes on the value of debts denominated in foreign currency.</p> <p>Tax-files must be returned before end of April of the year following the year in which the income arose. Individuals who are exempt from filing include employees whose salary income arose exclusively from one single employer and those whose final taxes have already been paid by way of withholding at source.</p> <p>Income tax provisions include a separate set of rules governing computation of income derived from business activity that are substantially the same as the computation of income under the corporate income tax scheme (CIT). The self-employed with business activities may choose to include business profits multiplied by 1.515 on their final tax return as part of their global taxable income and take a credit for advance at the corporate tax rate, or pay taxes on that income separately under the scheme for corporate business profits. If gross income the preceding year did not exceed 2.2. mill. pesos (1997) they may opt for the special regime for small taxpayers, where gross income is taxed at rates from 0 to 2.50 % (7 brackets). The simplified tax system permitted under the CIT is also applicable to individuals with income from business activities in the same sectors determining eligibility for corporations (see below).</p> | <p>Certain items of income are exempt from income tax when paid to individuals; these items include: income from agriculture, livestock raising, forestry, or fishery to the extent that income does not exceed 20 times annual minimum salaries; interest paid by credit institutions on savings deposits which do not exceed two times general minimum salaries for one year and whose interest does not exceed the rate fixed every year by the Congress; interest paid on investments in registered securities of the Federal Government; interest on bonds, securities, and other credit documents with terms exceeding one year and publicly issued under rules issued by the SHCP; interest paid on bonds and debts issued by international credit institutions of which the Mexican Government is a member; inheritances; fringe benefits calculated on the minimum wage provided they do not exceed the limits established under the Fiscal Law; certain social security benefits and other benefits received by workers.</p> <p>Deductions for personal expenses: expenses incurred for transportation to school of taxpayer's direct descendants in zones where transportation is necessary; medical, dental, and hospital expenses of the taxpayer and dependants; funeral expenses for the dependants up to the annual minimum wage; and donations made to qualified institutions. In addition, residents may deduct deposits made in special personal savings accounts, pension plan insurance premiums paid to Mexican institutions and the cost of shares in specified investment companies (up to a certain limit).</p> | <p><u>Taxable income</u>¹</p> <p>0</p> <p>3 639</p> <p>30 884</p> <p>54 275</p> <p>63 093</p> <p>75 539</p> <p>152 352</p> <p>240 128</p> | <p><u>Percentage on excess</u></p> <p>3</p> <p>10</p> <p>17</p> <p>25</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> |
| | | | <p><u>Fiscal Subsidy</u></p> <p><u>Taxable income</u>¹</p> <p>0</p> <p>3639</p> <p>30 884</p> <p>54 275</p> <p>63 093</p> <p>75 539</p> <p>152 352</p> <p>240 128</p> <p>304 704</p> <p>365 644</p> | <p><u>Percent subsidy on marginal tax</u></p> <p>50</p> <p>50</p> <p>50</p> <p>50</p> <p>40</p> <p>30</p> <p>20</p> <p>10</p> <p>0</p> |
| | | | <p>Income brackets are adjusted semi-annually for inflation.</p> <p>1) Each line refers to an income tax bracket whose lower limit is given on the line and upper limit on the next line.</p> | |

Source: 1998 Tax Law.

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates | |
|-----|---|---|--|---------------------------------------|
| | Income from the following sources receives special treatment: personal services, leasing of real property, sales of personal (non real estate) assets, up to net earnings three times the minimum wage. Special treatment encompasses the definition of deductible expenses, including interest and depreciation, and estimated tax payments and withholding. Taxpayers with income from these sources are eligible for the subsidy and credit (see Deductions and Exemptions) granted under the general provisions of the IIT. | Tax on income from agriculture, cattle breeding, forestry, fishery and book editing is reduced by 50 per cent. | <u>Salary credit (1998)</u> | |
| | | Fiscal subsidy. Individuals receive a credit against their income tax liability which is calculated as shown under Rates. | <u>Taxable</u> <u>income</u> ¹ | <u>Annual</u> <u>salary credit</u> |
| | | General credit. Individuals are entitled to a general tax credit of 1 303.86 pesos on an annual basis (1998). | 0.01 | 2 985 |
| | Dividends and profits distributed are exempt from IIT when paid out of the special account for distributable profits (see CIT below) or subject to a final tax at the CIT rate when distributed out of other resources. This final tax is applied to the dividend or distribution multiplied by 1.515. | Salary credit. Instead of the flat general credit, individuals earning salary income is entitled to a tax credit determined according to the schedule shown under Rates. | 12 972 | 2 983 |
| | | Foreign tax credit. Taxpayers are granted a credit for tax paid abroad on income from a foreign source. This credit is limited to the amount of foreign-source income times either the CIT rate for taxpayers who compute their tax according to the provisions for income from business activities or the IIT rate for taxpayers who compute their tax under the general IIT provisions. | 19 100 | 2 983 |
| | Individuals may choose to include dividends and profits in taxable income in which case dividends or profits received are multiplied by 1.515 and a credit against income tax liability is taken at the CIT rate. | | 19 457 | 2 982 |
| | | | 25 467 | 2 880 |
| | | | 25 943 | 2 805 |
| | | | 27 760 | 2 805 |
| | | | 32 604 | 2 598 |
| | | | 34 591 | 2 382 |
| | | | 39 125 | 2 160 |
| | | | 45 646 | 1 859 |
| | | | 52 166 | 1 596 |
| | | | 54 135 | 1 304 |

1) Each line refers to an income bracket whose lower limit is given on the line and upper limit on the next line.

Source: The 1998 Tax Law.

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|-----------------------|--|---------------------------|-------|
| 1.1.2 Withholding tax | <p>For interest that is not exempt under the individual income tax, the withholding tax is 17 per cent on the first 10 percentage points of interest. Interest paid to individuals on special savings accounts is subject to a withholding tax of 35 per cent that is creditable against the final liability. A 15 per cent withholding tax is applied to indexed saving accounts (UDIs). Interest and gains from derivative financial transactions are subject to a 15 per cent provisional withholding tax, creditable against the annual tax liability.</p> | | |
| | <p>Employment income is subject to monthly withholding of income tax at source at the rates shown under Rates. The withholding tax is creditable against final liability.</p> | | |
| | <p>Annual tax. In addition to the monthly withholding tax, the withholding agent must calculate every year the annual tax on employment income due by each employee at the annual IIT rates, considering the ordinary fiscal subsidy and a credit table that combines the credit tables used during the year for employment income proper or the general credit for other income.</p> | | |
| | <p>The obligation of employers to file an annual tax return on behalf of employees does not apply to employees who promise to file an annual return.</p> | | |

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|---------------------------------------|---|---|--------------|
| 1.1.3 Capital gains | Capital gains realised by individuals from the transfer or sale of immovable property, securities, and personal property are taxed as income from the transfer or disposition of goods. The sale price of assets is reduced by their acquisition cost adjusted for inflation to compute capital gains. A deduction for depreciation of buildings is also made. Capital gains arising from the acquisition of property are taxed as ordinary income. | Capital gains are not taxed if they arise in the following situations: gain from the sale of a personal residence if the individual lived in the residence for at least two years prior to the sale; transfer of ownership by reason of death or donations to immediate family members; gains from the sale of securities when the transaction is carried out through the Mexican stock exchange and certain exchanges of treaty countries; the gains from sale of personal property up to an annual amount not exceeding three times the minimum wage. | |
| 1.2 <i>Tax on foreign remittances</i> | Withholding tax on wages, interest and royalties paid to non-residents. | Exempt interest includes interest on loans granted to the Federal Government. | |
| 1.3 <i>Business</i> | A broad-based tax on income of legal entities. Income includes changes in the value of assets and liabilities due to inflation, for example, gain accruing to taxpayer as a result of the reduction in real value of debts. Taxable income equals gross income less expenses and net losses carried forward from preceding periods. Corporate income tax returns are due on March 31. | Dividend and profit distributions are exempt when paid out of the distributable profits account (<i>i.e.</i> after corporate income tax). | 34 per cent. |
| 1.3.1 Corporate income tax (CIT) | Receipts are deemed to accrue for the supply of goods and services on the day the relevant contract is concluded or upon any of the following events: issuance of a voucher for the price or delivery of the goods or some advance or partial payment for the goods, whichever occurs first. | Non taxable income includes: (i) capital increases; (ii) payments made by shareholders to cover losses; (iii) premiums received upon issuance of shares; (iv) appreciation of shares in other companies arising from the use of the equity accounting method of valuation; (v) revaluation of assets and capital; (vi) dividends and profits received from other resident legal entities. These must be included in the income subject to profit sharing. | |

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates | | | | | | | | |
|---------------------------|--|--|-----------|----------------|-------------------------|-------------------|---------------------------|----|---|----|---|
| | Interest is included in the taxable income of recipient companies. Royalties are normally included in the recipient's gross income. | Depreciation. Fixed assets can be depreciated at fixed yearly percentages (straight-line method) which for the following broad asset categories are: | | | | | | | | | |
| | Capital gains obtained by business companies are normally included in gross receipts. In determining taxable capital gain on sales of land, buildings, and machinery and equipment, the historical cost of the undepreciated balance is adjusted for inflation. Exchange rate gains and losses are treated as interest. | <table> <tr> <td>Buildings</td> <td>5¹</td> </tr> <tr> <td>Machinery and equipment</td> <td>5-25²</td> </tr> <tr> <td>Computers and peripherals</td> <td>30</td> </tr> <tr> <td>Vehicles</td> <td>25</td> </tr> </table> | Buildings | 5 ¹ | Machinery and equipment | 5-25 ² | Computers and peripherals | 30 | Vehicles | 25 | <p>Basis for annual depreciation is adjusted for inflation.</p> <p>1) A 10 % rate applies to constructions catalogued as archaeological, artistic, historical or patrimonial monuments.</p> <p>2) A few machineries have rates of 50-100 %.</p> |
| Buildings | 5 ¹ | | | | | | | | | | |
| Machinery and equipment | 5-25 ² | | | | | | | | | | |
| Computers and peripherals | 30 | | | | | | | | | | |
| Vehicles | 25 | | | | | | | | | | |
| | Companies must maintain a special account for distributable profits defined as profits net of CIT; non-deductible expenses other than reserves; and dividends received from other resident companies. Dividends and other distributions are deducted from the special account, as are any capital deductions treated as dividends. | Immediate deduction: Taxpayer may choose, instead of taking annual depreciation allowances under ordinary rules, an immediate depreciation deduction for certain assets. This deduction is a percentage of original cost, for example: | | | | | | | | | |
| | | <table> <tr> <td>Buildings</td> <td>74</td> </tr> <tr> <td>Machinery and equipment</td> <td>74-95.7</td> </tr> <tr> <td>Computers and peripherals</td> <td>94</td> </tr> </table> | Buildings | 74 | Machinery and equipment | 74-95.7 | Computers and peripherals | 94 | <p>The immediate deduction equals the present value of the annual depreciation allowances using a real discount rate of 3 per cent. Immediate deduction is not applicable to furniture, office equipment, vehicles and aeroplanes. Immediate deduction is available to taxpayers outside the three largest metropolitan districts -- Mexico City, Monterey, and Guadalajara -- and taxpayers regardless of their location with gross income and assets not exceeding 7 and 14 mill. pesos respectively.</p> | | |
| Buildings | 74 | | | | | | | | | | |
| Machinery and equipment | 74-95.7 | | | | | | | | | | |
| Computers and peripherals | 94 | | | | | | | | | | |

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|-----|---|---|---|
| | Simplified regime. Includes agriculture, livestock, forestry, fishery and land transportation activities. Taxable income is calculated on a cash-flow basis, where only resources taken out of the entity are subject to tax. | | 34 per cent. |
| | Special rate regime. Includes agriculture, livestock, forestry, fishery, silviculture and publishing. | | 17 per cent (or 25.5 per cent if these taxpayers, except those dedicated to publishing, commercialise or industrialise their products). |
| | Special regime for small taxpayers. Includes individuals carrying out business activities with a yearly gross income below 2.2 million pesos. | | 0-2.5 per cent of gross income. |
| | | Inventory. Not recognised for tax purposes. All purchases and costs of production are deductible when incurred. Interest and inflationary losses are deductible provided they are computed under rules that require the taxpayer to compute the inflationary profit derived from monetary liabilities. | |
| | | Loss carry-forward. Net losses may be deducted from taxable profits of the ten years following the year in which they were sustained. No carry-back is allowed. Net losses are adjusted for inflation. Losses realised on sales of shares, debt and other transferable securities may be deducted only from gains realised on the sale of such assets during the year of the loss or subsequent five years. | |
| | | Foreign tax credit. A credit is granted for tax paid abroad on income from a foreign source. This credit is limited to the amount of foreign-source income times the CIT rate. | |

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|------------------------------|--|---|--|
| 1.3.2 Tax on business assets | <p>A tax payable by corporations, unincorporated businesses and individuals (whether resident or non-resident) carrying out business activities or leasing to businesses subject to the tax, including maquiladoras. The assets tax is reduced by the amount of CIT paid. Further, the amount by which the CIT paid exceeds the assets tax in a given year can be used to obtain a refund of assets tax paid in any of the previous 10 years.</p> <p>The tax base is the average value of assets held during the taxable year or the prior four years at the taxpayer's option, less the average value of the liabilities to other business enterprises resident in Mexico, except those contracted with the financial sector. Tax is filed together with the income tax return. Procedures for adjusting the value of assets for inflation are specified in detailed rules.</p> | <p>Companies with income below 8.9 mill. Pesos are exempt. For financial institutions the tax is levied on assets and liabilities which are not subject to financial intermediation. Companies are not liable during: (i) the pre-operational period; (ii) first year of operation; (iii) two fiscal years following the first year of operation; and (iv) last fiscal year for companies in liquidation.</p> <p>When the CIT exceeds the tax on assets, the excess may be carried back for 10 years and credited against the minimum tax paid in any of those years, and a refund may be requested.</p> <p>The excess of the CIT over the tax on assets during the previous three years may be credited against the tax on assets in the current year.</p> | <p>1.8 per cent.</p> <p>(0.9 per cent for entities in the special rate regime, cf. above).</p> |

2. Social security contributions The social security system for private sector employees (IMSS) underwent a major reform in 1997 concerning both pensions and health insurance. The financing of the pension system, now based on individual accounts, is shared between employers, employees and the government according to the following scheme:

Contributions to pension scheme and disability insurance after the IMSS reform

| | Premium (per cent of wage) | Cap (times the minimum wage) | Financing |
|----------------------------------|-------------------------------|------------------------------------|-------------------------|
| Disability and life insurance | 2.5 | 15-25 ¹ | Tripartite ² |
| Retirees' medical care | 1.5 | 15-25 ¹ | Tripartite ² |
| Retirement and old-age severance | 4.5 | 15-25 ¹ | Tripartite ² |
| Government's contribution | 365 pesos ³ | - | Government |
| Retirement saving: | | | |
| individual account | 2.0 | 15-25 ¹ | Employer |
| INFONAVIT (housing) | 5.0 | 10 | Employer |
| Voluntary contributions | - | - | Employee/employer |

1. Rising from 15 minimum wages in 1997 to 25 minimum wages in 2007.
2. Employer 70 per cent, worker 25 per cent and government 5 per cent of total.
3. At 1997 constant prices, amount equivalent to 5.5 per cent of the minimum wage in the Federal district, indexed to this minimum wage.

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates | |
|-----|---|-----------------------------------|--------------------------|----------------------------|
| | | IMSS health fund financing | | |
| | | 1997 | 2007 | |
| | The financing of the health insurance system is being changed gradually over a transition period of ten years (1997 to 2007). | Government | | |
| | | Fixed | 13.9 x Min.w. | 13.9 x Min.w. |
| | | Maternity and sickness | 0.05 % of wage | 0.05 % of wage |
| | | Employers | | |
| | | Fixed | 13.9 x Min.w. | 20.4 x Min.w. |
| | | Proportional | 6 % of wage > 3 x Min.w. | 1.1 % of wage > 3 x Min.w. |
| | | Maternity and sickness | 0.70 % of wage | 0.70 % of wage |
| | | Employees | | |
| | | Proportional | 2 % of wage > 3 x Min.w. | 0.4 % of wage > 3 x Min.w. |
| | | Maternity and sickness | 0.25 % of wage | 0.25 % of wage |

Source: National authorities; OECD *Economic Survey*, Mexico, 1998.

3. Domestic taxes on goods and services

3.1. Value-added tax

VAT is levied on the following transactions: transfer of goods; rendering of independent services, including professional services and interest not specifically exempt; granting of temporary use or right to use goods (leasing); imports of goods and services.

Tax point. A taxable transfer of goods is deemed to be carried out and the tax is due when: (i) the property is physically delivered; (ii) the price is wholly or partially paid; (iii) the relevant document covering the transfer is issued.

Taxable amount. VAT is calculated on the price, inclusive of any taxes, fees, interest, or penalties. If there is no price, the base is the market value. If there is no market value, then an estimated value is used.

Tax credit. Taxpayers may deduct from their VAT liability the VAT charged on inputs or paid by the taxpayer on imports.

Tax refund. If credits in a month exceed the liability to VAT, the taxpayer may carry the balance forward to the next month or apply for a tax refund of the full balance.

Exempt persons. Individuals engaging in business activities who supply goods or services exclusively to final consumers are exempt provided their receipts in the previous year do not exceed one million pesos (a number adjusted annually for inflation). Individuals engaging in agriculture, forestry, or fishery are exempt within the same limit.

15 per cent.

10 per cent for border regions.

Zero-rated goods and services: non processed animal and vegetable products except rubber; food except processed food and smoked salmon and caviar; patented medicines; milk; ice and water; specified services, machinery and equipment for agriculture and fishery; wholesale of gold, gold bullions and jewellery with a content of at least 80 per cent of gold.

Exports are zero rated.

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|--------------|---|---|---|
| | | Exempt transactions: inheritances; gifts; land; construction attached to land provided that it is used for dwelling homes; books, periodicals, magazines, and copyrights; used personal property; tickets for lotteries and games and prizes paid; Mexican and foreign currency; company shares, stock shares, and bonds. | |
| | | Exempt services: employee services rendered for remuneration; education at recognised schools and institutions; public transportation of persons by land (transportation by railroad is taxable); insurance of risks of agriculture and cattle raising; life insurance covering pensions and annuities; interest on most business loans and for first mortgage loans to individuals and other kind of interest specified in the law; derivative financial transactions; medical services. | |
| 3.2. Excises | An excise tax is levied on specified goods and services. The tax is levied under a value-added system up to the wholesale level. Cigarettes, gasoline, and diesel are taxed only at the producer or importer level. | | <p>Fuel: Based on the difference between the import parity and the regulated final consumer price.</p> <p>Beer.: 25-60 per cent.</p> <p>Wine: 25-30 per cent.</p> <p>Alcoholic beverages: 60 per cent.</p> <p>Mineral oils: 39.3-78.9 per cent.</p> <p>Tobacco: 20.9-85 per cent.</p> <p>New automobiles: 2 to 17 per cent plus a fixed amount, both based on the purchase price.</p> <p>Source: OECD, <i>Consumption Tax Trends</i>, 1998 edition.</p> |
| | Taxable amount. With respect to imports, the excise tax is normally calculated on the import value plus customs duties and other duties paid on importation, except VAT. | | |

Main features of the tax system, 1998 (continued)

| Tax | Nature of Tax | Deductions and Exemptions | Rates |
|---|---|---|--|
| 4. Taxes on international trade and transactions | | | |
| 4.1. <i>Import duties</i> | <p>Customs duties are levied on the customs value of most imported goods.</p> <p>Compensatory duties may be imposed on merchandise that the Ministry of Commerce has demonstrated to have been imported under conditions involving unfair practice in international trade.</p> <p>In addition to import duties, imports may be subject to VAT and excise taxes.</p> | <p>Goods may be temporarily imported duty free. The customs authorities may permit that merchandise be processed, transformed, or repaired within bonded premises to be subsequently exported or returned abroad.</p> | <p>The tariff provides for rates of up to 20 per cent. The average tariff rate has been reduced to about 11 per cent (1995).</p> |
| 4.2. <i>Export duties</i> | <p>Export duties are levied on a few exported goods, for example, live rattlesnakes and turtles, although the export of most manufactured goods is not taxed.</p> | | |
| State taxes | | | |
| 1. <i>State payroll tax</i> | <p>The Federal District and some states levy a small tax on payrolls to be withheld by employers.</p> | | |
| 2. <i>Tax on the transfer of property</i> | <p>The sale of immovable property is subject to a federal tax and a similar tax levied by each state under an agreement to avoid double taxation. The tax base is the sale price.</p> | <p>No inheritance tax is levied at either the federal or local level.</p> | <p>The rate of the federal tax is 2 per cent, and local taxes may not be higher than the federal tax.</p> |
| 3. <i>Tax on motor vehicles</i> | <p>The states operate a tax on motor vehicles older than 10 years, based on the residual value of the vehicle. More importantly, they administer and appropriate the proceeds from the federal tax on motor vehicles that applies to vehicles less than 10 years old. This tax is based on the purchase price adjusted for inflation and depreciation.</p> | | |
| Municipal taxes | | | |
| <i>Local tax on property</i> | <p>The tax is levied on the cadastral value of immovable property.</p> | | |

Table A2. Rates and structure of income tax on individuals, 1998

| | Taxes raised by Central Government | | | | Rates of sub-national taxes, per cent | Top marginal tax rate on wage income, per cent | Deductibility of interest payments ² | | Imputed rental income |
|---------------------|--|--------------------------------------|-----------------|------------|---------------------------------------|--|---|-------------|-----------------------|
| | Highest and lowest marginal rate per cent ¹ | Number of tax schedules ¹ | Zero rated band | Tax credit | | | Housing | Consumption | |
| Mexico | 3 - 35 | 8 | Yes | No | - | 35.0 | N | N | E |
| United States | 15 - 39.6 | 5 | Yes | No | 0 - 11.6 | 48.1 | FA(C) | N | E |
| Canada | 17.5 - 31.3 | 4 | No | Yes | 0 - 22.8 | 54.1 | N | N | E |
| Germany | 25.9 - 53.0 | 3 | Yes | No | - | 55.9 | N | N | E |
| Greece ³ | 5 - 40 | 4 | Yes | No | - | 40.0 | FA | N | T |
| New-Zealand | 15 - 33 | 3 | No | Yes | - | 33.0 | N | N | E |
| Portugal | 15 - 40 | 4 | No | Yes | - | 46.6 | FA(C) | N | E |
| Spain | 17 - 47.6 | 8 | Yes | No | 3 - 8.4 | 56.0 | PC | N | T |
| Turkey | 25 - 55 | 7 | Yes | No | - | 61.3 | FA | N | T |

1. Excluding zero band or allowance.

2. Key to abbreviations: FA = Full deduction of tax allowance; PC = Partial (proportionate) deduction of tax credit; (C) = Deduction subject to a ceiling; N = No deduction; E = Exempt; T = Taxed.

3. 1997 instead of 1998.

Source: National authorities; The OECD Tax Data Base, 1998; European Tax Handbook, 1998.

Table A3. Statutory rates and rules for taxation of corporations, 1998

| | Central government basic rate per cent | Top marginal rate ¹ per cent | Net worth tax | Dividends wedge ² | Special rates (incl. small profits rate) per cent |
|-------------------------|--|--|---|------------------------------|---|
| Mexico | 34 | 34 | Net worth tax of 1.8 per cent. | 35 | 17/25.5 |
| United States | 35 | 39.5 | No tax on corporate net worth | 67.7 | 15 |
| Canada | 29.1 | 46.1 | No tax on corporate net worth | 73.6 | 13.12/22.12 |
| Germany ³ | 47.5/30 | 58.2 | Business tax on capital abolished as of January 1998 | 49.3 | 44.31/23.74 |
| Greece ⁴ | 35/40 | 40/35 | No tax on corporate net worth | 53.8 | - |
| New-Zealand | 33 | 33 | .. | 33 | - |
| Portugal | 34 | 37.4 | No tax on corporate net worth | 53.1 | - |
| Spain | 35 | 35.8 | No tax on corporate net worth | 60.4 | Several, depending on activity |
| Turkey | 25 | 44 | No tax on corporate net worth | 66.4 | 20 |
| <i>Memorandum item:</i> | | | | | |
| Argentina | | 33 | | | |
| Brazil | | 25 | | | |
| Chile | | 15 | | | |

1. Including local taxation and surcharges.

2. Differences between the pre-tax profit earned by the distributing company and the net dividend received by the shareholder.

3. These rates apply to retained profits only.

4. 1997 instead of 1998.

Source: The OECD Tax Data Base, 1998; National sources and the European Tax Handbook, 1998; KPMG Corporate tax rate survey, March 1998.

Table A4. Main features of VAT systems in selected countries

| | Standard VAT rate | Concessions to small traders (in US dollars) | Departures from standard exemptions ¹ | | Coverage of lower rates | |
|----------------------|-------------------|---|--|---|---|---|
| | | | Exemption other than "standard exemptions" | Taxation of "standard exemptions" | Zero rate ² | Lower rates |
| Mexico | 15 | 112 194 | The sale of books, newspapers, magazines, gold and silver coins and share, the exchange of foreign currency, retailing of gold bullion, authors' rights, Public transport of passengers by land, agriculture, forestry and fishing activities. | Postal and insurance services except life and agricultural insurance. The letting of commercial buildings and financial services for consumer credits and personal loans. | The sale of non processed animals and vegetables except rubber; patent medicines, milk, water, ice, food except processed food and smoked salmon and caviar; agricultural equipment and machinery and fishing boats; the wholesale of gold, gold bullion and jewellery, some agricultural and fishing services, the letting of some agricultural machinery and equipment, the export of goods and services. | The sale of goods and services in the border regions. Rate = 10 per cent. |
| United States | - | - | - | - | - | - |
| Canada ³ | 7/15 | 22 760 | Child care, legal aid, ferry, road and bridge tolls, standard municipal services. | Lotteries and gambling, supply and leasing of commercial land and buildings, domestic postal services. | Medicine, basic groceries, exports, certain financial services (usually to non-residents), certain agricultural and fishing products, medical devices , international travel and transportation services, international organisations and officials, agriculture, precious metals, (sales of 25 cents or less made through mechanical coin-operated devices). | - |
| Germany ⁴ | 16 | 21 352 | - | - | - | Books, food, newspapers, certain cultural events, charitable work if not exempt, transport (only applies to passenger transport by ship and to local public passenger transport). Rate = 7 per cent. |

Table A4. Main features of VAT systems in selected countries (continued)

| | Standard VAT rate | Concessions to small traders (in US dollars) | Departures from standard exemptions ¹ | | | Coverage of lower rates | |
|--------------------------|-------------------|---|---|---|---|--|--|
| | | | Exemption other than "standard exemptions" | Taxation of "standard exemptions" | Zero rate ² | Lower rates | |
| Greece ⁵ | 18 | 7 444 | - | Culture (lower rate) | - | Books, culture, food, medicine, newspapers. Rates = 4 and 8 per cent. | |
| New-Zealand ⁷ | 12.5 | 21 126 | Supply of fine metal (gold, silver and platinum). | Postal services, medical care, dental care, charitable work (other than unconditional gifts), education, non-commercial activities of non-profit making organisations (other than unconditional gifts), cultural services, insurance and reinsurance (other than life insurance and reinsurance), letting of immovable property (other than residential accommodation), lotteries and gambling, supply of land and buildings (other than those which have been used for the provision of residential accommodation for five years or more). | The supply of a taxable activity (business) as a going concern; the supply of fine metal (gold, silver or platinum) from a refiner in fine metal; the supply by a local authority of the local authorities petroleum tax (the distribution of the local authorities petroleum tax between local authorities); the exportation of goods and services (being goods and services to be consumed outside NZ's borders). | For long term stay in a commercial dwelling. certain services. if provided as part of the right to occupancy are subject to tax at the standard rate on 60% of the value of the supply (an effective lower rate on such services of 7.5 per cent). | |
| Portugal ⁶ | 17 | 12 790 | Agriculture | - | - | Food, essentials, medicines, books, newspapers, electricity, water distribution, accommodation services, passenger transport, admission to sporting events. Rates = 5 and 12 per cent. | |

Table A4. Main features of VAT systems in selected countries (continued)

| | Standard VAT rate | Concessions to small traders (in US dollars) | Departures from standard exemptions ¹ | | | Coverage of lower rates |
|---------------------|-------------------|---|--|--|------------------------|--|
| | | | Exemption other than "standard exemptions" | Taxation of "standard exemptions" | Zero rate ² | Lower rates |
| Spain | 16 | - | Copyright to literature and works of art. | Some cultural services provided consumers pay for them. | - | Books, social lodgement, catering, certain cultural and entertainment services, food, hotels, restaurants, supplies to the handicapped, medicines, transport, newspapers, public amenities, burial services, agricultural and forestry. Rates = 4 and 7 per cent. |
| Turkey ⁸ | 15 | - | Deliveries and repairs of maritime, aircraft or railway transport vehicles used for business activities, social services, water used in agriculture. | Educational and cultural service, news papers, books, magazines (lower rate), postal services, sale of commercial buildings, letting, radio and television broad casting, hospitals, lotteries and gambling. | - | Agricultural products, leasing, second hand cars, news papers, books, magazines, basic food stuffs, natural gas, cinema, theatre, opera, ballet and education. Rates = 1 to 8 per cent. |

1. Standard exemption are the following: postal services, transport of sick/injured persons; hospital and medical care; human blood, tissues and organs; dental care; charitable work; education; non-commercial activities of non-profit making organisation insurance and reinsurance; letting of immovable property; financial services; betting, lotteries and gambling; supply of land and buildings; certain fund-raising events.
2. All countries apply zero rates to exports.
3. 15% Harmonised Sales Tax (HST) applies in those provinces that have harmonised their provincial retail sales tax with the federal GST (the 15% HST is composed of a provincial component of 8% and a federal component of 7%).
4. This rate is applied as of 1 April 1998.
5. Tax rates are reduced by 30% in some remote areas.
6. 17% in Madeira and Azores autonomous regions.
7. For long term stay in a commercial dwelling GST at standard rate is levied on 60% of the value of the supply.
8. Turkey applies a 23 to 40 % rate on certain luxurious goods.

Source: *Consumption Tax Trends*, OECD 1998.

BIBLIOGRAPHY

- Barro, Robert J. (1991), "Economic growth in a cross-section of countries", *Quarterly Journal of Economics*, Vol. 106.
- Carey, David and Harry Tchilinguirian, "Average effective tax rates on capital, labour and consumption", *OECD Economics Department Working Paper* (forthcoming), Paris.
- Easterly, W. and S. Rebelo (1993), "Fiscal policy and economic growth: an empirical investigation", *Journal of Monetary Economics*, Vol. 32.
- Engen, Eric and Jonathan Skinner (1996), "Taxation and Economic Growth", *National Tax Journal*, Vol. 49, No. 4, December.
- Feldstein, M. and D. Feenberg (1996), "The effect of increased tax rates on taxable income and economic efficiency: a preliminary analysis of the 1993 tax rate increases", *Tax Policy and the Economy* v. 10, J. Poterba, ed., pp. 89-117, MIT Press, Cambridge MA.
- Gil Diaz, Francisco (1995), "Fiscal policy and tax administration: the experience of Mexico", *Tax Administration in Latin America*, Inter-American Development Bank, Washington DC.
- Goode, Richard (1984), *Government Finance in Developing Countries*, The Brookings Institution, Washington.
- Goolsbee, Austin (1997), "What happens when you tax the rich? Evidence from executive compensation", *NBER Working Paper* No. 6333.
- Gordon, Kathryn and Harry Tchilinguirian (1998), "Marginal effective tax rates on physical, human and R&D capital", *OECD Economics Department Working Papers* No. 199, Paris.
- Hendricks, Lutz (1999), "Taxation and Long-Run Growth", *Journal of Monetary Economics*, Vol. 43, No. 2, April.
- Inter-American Development Bank (1997), *Latin America after a Decade of Reform: Economic and Social Progress*, Washington DC.
- King, R.G., and S. Rebelo (1990), "Public policy and economic growth: developing neoclassical implications", *Journal of Political Economy*, Vol. 98.
- Leibfritz, Willy, John Thornton and Alexandra Bibbee (1997), "Taxation and economic performance", *OECD Economics Department Working Papers* No. 176, Paris.

- Levine, R. and D. Renelt (1992), "A sensitivity analysis of cross-country growth regressions", *American Economic Review*, Vol. 82.
- Mansfield, Charles (1988), "Tax administration in developing countries: an economic perspective", IMF *Staff Papers*, Washington DC.
- Mendoza, Enrique G., Assaf Razin and Linda L. Tesar (1994), "Effective tax rates in macroeconomics: cross-country estimates of tax rates on factor incomes and consumption", *Journal of Monetary Economics*, No. 34.
- Mendoza, Enrique G., Gian Maria Milesi-Feretti and Patrick Asea (1997), "On the Ineffectiveness of Tax Policy in Altering Long-Run Growth: Harberger's Superneutrality Conjecture", *Journal of Public Economics*, Vol. 66, No. 1, October.
- Messere, Ken (1993), *Tax Policy in OECD Countries: Choices and Conflicts*, IBFD Publications BV, Amsterdam.
- Milesi-Feretti, Gian Maria and Nouriel Roubini (1998), "Growth Effects of Income and Consumption Taxes", CEPR *Discussion Paper* No. 1979, September.
- Norregaard, John (1990), "Progressivity of income tax systems", OECD *Economic Studies* No. 15, Paris.
- OECD (1994), *The OECD Jobs Study -- Facts, Analysis, Strategies*, Paris.
- OECD (1995), *The OECD Jobs Study -- Taxation, Employment and Unemployment*, Paris.
- OECD (1997), *Implementing the OECD Jobs Strategy -- Lessons from Member Countries' Experience*, Paris.
- OECD (2000), "Tax burdens: alternative measures", OECD *Tax Policy Studies* No. 2, Paris.
- Plosser, C.I. (1992), *The Search for Growth, Policies for Long-Run Economic Growth*, Federal Reserve Bank of Kansas City.
- Shome, Partasarathi (1992), "Trends and future directions in tax policy reform: a Latin American perspective", IMF *Working Paper* 92/43, Washington DC.
- Slemrod, Joel (1995), "What do cross-country studies teach about government involvement, prosperity and economic growth", *Brookings Papers on Economic Activity*, 2.
- Slemrod, Joel (1998a), "The economics of taxing the rich", NBER *Working Paper* No. 6584, Cambridge, MA.
- Slemrod, Joel (1998b), "Are 'real' responses to taxes simply income shifting between corporate and personal tax bases?", NBER *Working Paper* No. 6576, Cambridge, MA.
- Slemrod, Joel (1998c), "A general model of the behavioural response to taxation", NBER *Working Paper* No. 6582, Cambridge, MA.
- Tanzi, Vito and Anthony Pellechio (1995), "The reform of tax administration", IMF *Working Paper* 95/22, Washington DC.

**ECONOMICS DEPARTMENT
WORKING PAPERS**

232. *EMU, the Euro and the European policy mix*
(February 2000) Jonathan Coppel, Martine Durand and Ignazio Visco
231. *The tax system in Japan: a need for comprehensive reform*
(February 2000) Thomas Dalsgaard and Masaaki Kawagoe
230. *The size and role of automatic fiscal stabilisers in the 1990s and beyond*
(January 2000) Paul van den Noord
229. *Enhancing environmentally sustainable growth in Finland*
(January 2000) Ann Vourc'h and Miguel Jimenez
228. *Finance and growth: Some theoretical considerations, and a review of the empirical literature*
(January 2000) Kotaro Tsuru
227. *What the yield curves say about inflation: Does it change over time?*
(December 1999) Sebastian T. Schich
226. *Summary Indicators of Product Market Regulation with an Extension to Employment Protection Legislation*
(December 1999) Giuseppe Nicoletti, Stefano Scarpetta and Olivier Boylaud
225. *Some Issues Related to the Equity-Efficiency Trade-Off in the Swedish Tax and Transfer System*
(November 1999) Henning Strand
224. *The Economic Effects of Employment-Conditional Income Support Schemes for the Low-Paid: An Illustration from a CGE Model Applied to Four OECD Countries*
(October 1999) Andrea Bassanini, Jørn Henrik Rasmussen and Stefano Scarpetta
223. *The Use of Financial Market Indicators by Monetary Authorities*
(September 1999) Paul Mylonas and Sebastian Schich
222. *Tax Reform in Switzerland*
(August 1999) David Carey, Kathryn Gordon and Philippe Thalman
221. *Trends in Market Openness*
(August 1999) Jonathan Coppel and Martine Durand
220. *Technology Upgrading with Learning Cost: A Solution for Two "Productivity Puzzles"*
(July 1999) Sanghoon Ahn
219. *Testing for a Common OECD Phillips Curve*
(July 1999) Dave Turner and Elena Seghezza
218. *Sustainable Economic Growth: Natural Resources and the Environment*
(July 1999) Paul van den Noord and Ann Vourc'h
217. *Coping with Population Ageing in Australia*
(July 1999) David Carey

216. *Estimating Prudent Budgetary Margins for 11 EU Countries: A Simulated SVAR Model Approach*
(July 1999) Thomas Dalsgaard and Alain de Serres
215. *The Problems and Prospects Faced by Pay-As-You-Go Pension Systems: A Case Study of Greece*
(June 1999) Paul Mylonas and Christine de la Maisonneuve
214. *Greek Public Enterprises : Challenges for Reform*
(May 1999) Paul Mylonas and Isabelle Joumard
213. *The Levels and Cyclical Behaviour of Mark-Ups across Countries and Market Structures*
(May 1999) Joaquim Oliveira Martins and Stefano Scarpetta
212. *Poverty Dynamics in Four OECD Countries*
(April 1999) Pablo Antolín, Thai-Thanh Dang and Howard Oxley
Assisted by Ross Finnie and Roger Sceviour
211. *The Recent Experience with Capital Flows to Emerging Market Economies*
(February 1999) Sveinbjörn Blöndal and Hans Christiansen
210. *Foreign Portfolio Investors Before and During a Crisis*
(February 1999) Woochan Kim and Shang-Jin Wei
209. *Towards More Efficient Government : Reforming Federal Fiscal Relations in Germany*
(February 1999) Eckhard Wurzel
208. *Stock Market Fluctuations and Consumption Behaviour: Some Recent Evidence*
(December 1998) Laurence Boone, Claude Giorno and Pete Richardson
207. *Microeconomic analysis of the retirement decision: The Netherlands*
(June 1998) Maarten Lindeboom
206. *Microeconomic analysis of the retirement decision: United Kingdom*
(June 1998) Raffaele Miniaci and Elena Stancanelli
205. *Microeconomic analysis of the retirement decision: Italy*
(June 1998) Raffaele Miniaci
204. *Microeconomic analysis of the retirement decision: Germany*
(June 1998) Pablo Antolin and Stefano Scarpetta
203. *Microeconomic analysis of the retirement decision: United States*
(June 1998) Joseph Quinn, Richard Burkhauser, Kevin Cahill and Robert Weathers
202. *The retirement decision in OECD countries*
(June 1998) Sveinbjörn Blöndal and Stefano Scarpetta
201. *The macroeconomic effects of pension reforms in the context of ageing populations: overlapping generations model simulations for seven OECD countries*
(June 1998) Ketil Hviding and Marcel Mérette