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1. INTRODUCTION

Mexico experienced dramatic economic changes in the late eighties and the beginning of the nineties. These changes, most of which seem by now irreversible, have turned Mexico from an inward-looking country to a very open one; from a country with a very high economic participation of the state, to one in which state intervention keeps shrinking; from an economy with a high inflation rate and a sizable government deficit to one in which both macroeconomic variables have been by now controlled. Although several serious problems remain (such as an extremely unequal distribution of income, very low savings, and a sizable current account deficit), the Mexican economy is growing, albeit moderately, on what seems to be a stable path.

The purpose of this paper is to make an appraisal of the recent tax reforms in Mexico, putting emphasis on their macroeconomic consequences. The paper also examines the pattern of government expenditures along the last three presidential regimes, together with some other issues such as the privatization of public enterprises. The plan is as follows: Section 2 provides a brief account of the recent evolution of the Mexican economy. Section 3 looks more closely at recent tax reforms on the main categories: the corporate income tax, the personal income tax, the value added tax, excise taxes, tariffs, and other sources of revenue. It also presents an international comparison of the tax effort. It concludes with some comments, given the space limitation, on three other fiscal issues: privatization, fiscal federalism and tax enforcement. Section 4 examines, in contrast, recent changes in the composition of government expenditures, and provides an international comparison of expenditures by function. The last section presents the conclusions.

2. A BRIEF ACCOUNT OF THE MEXICAN ECONOMY

This section provides a quick overview of the most important economic events, paying particular attention to fiscal reforms, that took place in Mexico from 1977 to 1994. This period covers the regimes of the last three presidents: López Portillo, De la Madrid, and Salinas. The review is divided in three brief parts, each corresponding to one presidential regime; this division is useful since, as is well known, the executive in Mexico has enough control over the legislative branch to make the important economic decisions almost entirely his own responsibility.

Our review will not be complete, however, without mentioning, at least in passing, two other key periods in the development of the Mexican economy. The first one is known as the "stabilizing development" (*desarrollo estabilizador*) period and covers the fifties and sixties. During these years Mexico experienced a very high rate of growth (the average real growth rate from 1950 to 1970 was greater than 6%), and a remarkable stability of prices. It is worth noting that government revenue was then, as one would expect given the stage of development of Mexico, mostly dependent on indirect taxes. The tax burden in the case of direct taxes was quite low compared to other countries with roughly the same stage of development, although it kept rising as a result of increases in the income tax schedules over the years. In any case, government revenue did not have to grow very fast to match the relatively minor rate of growth of expenditures that Mexico experienced in the fifties and sixties.

The second period is sometimes called the "shared development" (*desarrollo compartido*) period, and it corresponds to the years in which President Echeverría was in power (1970-1976). Under his mandate, the Mexican government suddenly changed the direction of (some) economic and social policies. It was felt by the new group in power that the success of the old strategy was made at the expense of a worsening income distribution, a deterioration of living standards, and a low employment rate. Although only the first of these indictments was surely true, the political climate prevailing then in Mexico, and in the rest of Latin America for that matter, was very conducive to changes.

Thus, as it was also common at that time in other Latin American countries, the government decided to promote a better income distribution and a higher employment rate by increasing the role taken by the public sector. On the revenue side, there were plans of making rather comprehensive changes in the tax system. The plans, as recounted by Gil Díaz (1987 and 1990), called for a more progressive tax system, an increase in excise taxes, an effort to improve tax compliance, and, above all, an attempt to globalize as much as possible income taxation. However, a very strong opposition from the private sector forced the government, as early as December 1972, to stop short in its tax reform. This confrontation is by now a textbook case on the political economy of Mexican tax reforms (see Solís, 1981).

Expenditures, on the other hand, grew fast during this period. Furthermore, the number of state-owned enterprises increased ten-fold (from 84 in 1970 to 845 in 1976). In order to finance this increase in expenditures, given the constraint on tax revenue, the government had to rely on foreign borrowing (which increased more than four times during the period), domestic borrowing, and an inflation tax. At the end, the Mexican economy had to endure a high (for Mexican standards) inflation rate, significant budget and trade deficits, and an overvalued fixed exchange rate. After two decades of fixed parity, the peso had to be devalued in 1976.

2.1. *The López Portillo Period: 1977-1982*

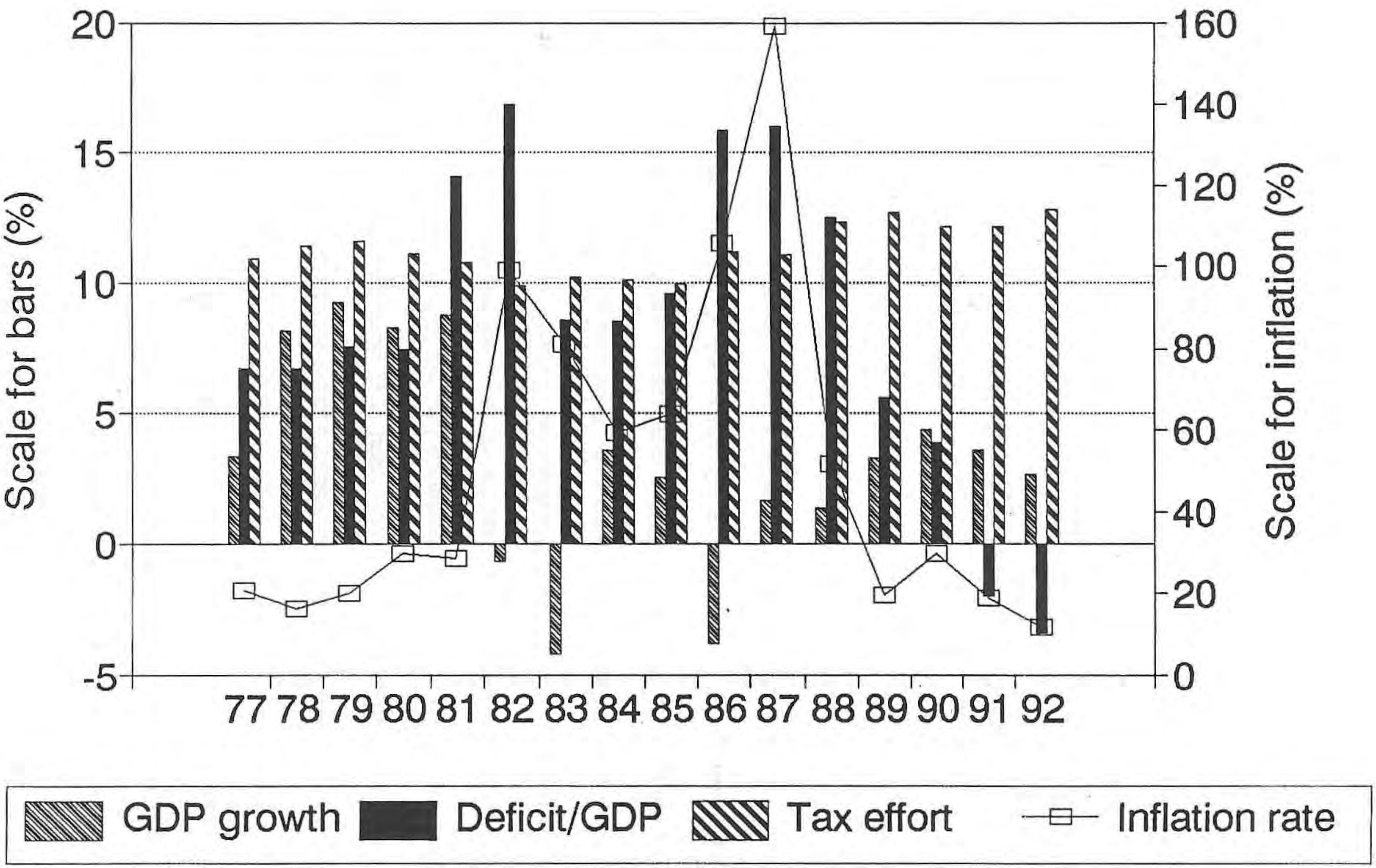
These years can be usefully divided into three sub-periods. The one going from the end of 1976 to the end of 1977, when stabilization took place under a stand-by agreement with the IMF. The second one, that lasted until the beginning of 1981, when oil discoveries and easy foreign credit helped to break all the constraints to growth. And the final period, running from the end of 1981 to the end of 1982, when the drop in oil prices, the increase in world interest rates, and the rising trade deficit made Mexico to stop interest payments on its foreign debt.

During the stabilization period, the government simply reduced expenditures. However, very soon the constraint on expenditures was not binding since the oil revenues of PEMEX, the state-owned monopoly, were increasing very fast in the second half of the seventies, and Mexico was allowed again to borrow in the Eurocurrency market. From 1978 on, the economy was growing again and at an increasing pace. This is shown in Figure 1. As can be also appreciated from the figure, in the first years of the recovery, inflation was moderate and the increase in the public deficit was not unduly high.

Given the state of a booming economy, the tax authorities found themselves in a very comfortable situation during that period: tax reforms were initiated in 1978 and were mostly done to make the tax system more progressive and to simplify tax collection. Furthermore, the treasury was able to introduce at the beginning of 1980 a value-added tax, to be reviewed in the next section, a tax that had been strenuously opposed by the private sector in the sixties.

Once the federal government was able again to borrow from abroad, it did it with zest. During the year of 1981 alone, Mexico managed to borrow more than 19 billion dollars. They were used to finance, first, the rapidly increasing trade deficit; second, the burgeoning capital

FIGURE 1
EVOLUTION OF THE MEXICAN ECONOMY



flight that developed after the domestic currency was let to appreciate and the private agents were speculating that the twin deficits were unsustainable in the long-run; and, third, the interest payments on foreign debt that were increasing as the world interest rates climbed up.

Public expenditures grew very fast in the early eighties. The federal government was engaged in a very ambitious public investment program, and was also in need to finance the deficit of the rest of the public sector (it even had to rescue a big private conglomerate in 1981). There were also many public enterprises: during President López Portillo's mandate, the number of state-owned (federal level) enterprises grew from 845 to 1155. These included the phone monopoly, two main airlines, most of the steel companies, and, finally, all the commercial banks. The latter were nationalized the day of the last presidential address in 1982.

As can be appreciated from Figure 1, the public deficit was already at the end of 1980 at very worrisome levels. Curiously enough, the more the economy seemed to grow, the more the government seemed to need to increase expenditures (these outright procyclical policies have been examined in Urzúa, 1991). The final outcome is well known: due to all those domestic factors, and two key external factors, the drop in oil prices and the increase in world real interest rates, the Mexican economy was almost bankrupt in 1982.

2.2. *The De la Madrid Period: 1983-1988*

During this period there were several attempts to stabilize the economy. Tax reforms and the control of government expenditures were seen as key ingredients in all these stabilization programs. The government deficit had to be controlled through an increase in tax collection, a realignment in the prices of government produced goods, and a cut in government spending.

In 1983 the basic rate for the VAT was increased together with the personal income tax (see the next section). Excise taxes were also increased. As shown in Figure 1, with an increase in taxes, a sharp reduction in government expenditures (especially capital expenditures), and a devaluation, Mexico soon started reaping benefits: after a considerable decrease in GDP in 1983, the economy rebounded in 1984 while the inflation rate was lowered, the public deficit was halved, and the current account balance was turned around.

In 1986, however, the Mexican economy suffered a large external shock when the world oil prices collapsed. The drop in oil revenue and the increase in expenditures due to an election year had an immediate effect on the public deficit (see Figure 1). By 1987, Mexico was experiencing a record annual inflation rate of 159%, and the peso was suffering speculative attacks. All those factors impelled the government to implement a somewhat heterodox stabilization program called the Economic Solidarity Pact (*Pacto de Solidaridad Económica*) in December 1987. After reaching a consensus among the government, the private sector and the workers, the pact was implemented along the following lines: a freeze of prices and wages, a sharp devaluation of the peso which was used afterwards as a nominal anchor, a reduction of tariffs (which continued the trend of current account liberalization initiated in the mid-eighties), a very restrictive fiscal policy,[1] and a somewhat restrictive monetary policy. As shown in Figure 1, the pact was quite successful in bringing down, at the end of De la Madrid's period, both the inflation rate and the public deficit without going into a recession.

[1] The control of the fiscal deficit was made easier by the fact that the process of privatization of state-owned enterprises was already quite alive at that time. As shown in Section 4, the number of public enterprises was almost halved during De la Madrid's regime (although most of the sales involved small- and medium-sized enterprises).

2.3. *The Salinas Period: 1989-1994*

During his mandate, President Salinas implemented major economic reforms that would have appeared unthinkable only a few years before. Quite stringent fiscal and monetary policies were sustained during the period. There was a continuation of a privatization program that ranks as the largest (in terms of enterprises sold) in the Western world. A free trade agreement with the United States and Canada was signed in 1993. And, finally, there was even an agrarian reform that disposed of the *ejidos* system, the communal land regime that resulted from the Mexican Revolution (1910-1921).

The macroeconomic indicators shown in Figure 1 for this period are positive.[2] The economy grew at a moderate pace while the inflation rate was kept at a reasonable level. The tax effort increased with the application of some reforms. And lastly, the public deficit was finally controlled. In fact, in 1992 and 1993 the government was able to run surpluses.

The tax system was frequently revised by the Salinas administration. One of the purported goals pursued by the reforms was to lower the income tax rates to make them comparable to the ones in United States, while at the same time keeping tax revenue constant. As reviewed in the next section, this was (somewhat) accomplished by widening the tax base and devising new mechanisms to increase tax compliance. Another two reforms that deserve special mention are the reduction of the basic VAT rate, accompanied by an increase in fuel and electricity prices, at the end of 1991, and the fiscal stimulus to the economy at the end of 1993 that was achieved by lowering income tax rates.

Regarding the privatization process, there was a definite push forward during the period.

[2] Although, as it was mentioned earlier and will be further commented later, other economic (and social) indicators are not quite bright.

Among those enterprises that were privatized, there were some quite profitable, like the commercial banks and the phone monopoly. The only big enterprises that apparently will remain in the hands of the state are the oil company PEMEX, the electric utilities and the train system. It should be mentioned that although the government originally meant to put most of the revenue from privatization in a "contingency fund", the money was mostly used, at the end, to reduce the debt overhang (see Section 4).

On the other side of the balance sheet, the Salinas administration continued to pursue stringent expenditure policies during the entire period. Government capital investment continued to be low (although increasing), and the administration actively pursued a decrease in current expenditures by means of a reduction in the number of employees in the federal government. The only expenditure items that increased significantly over the years were the ones corresponding to social expenditures. In particular, as reviewed in Section 4, the so-called National Solidarity Program, which was created in 1990 with the main objective of attacking extreme poverty, received an increasing level of funds over the period.

3. FISCAL REFORMS IN MEXICO

In this section, we will examine the most recent reforms on the corporate income tax, the personal income tax, the value added tax, and other taxes (such as excise and trade taxes). We will also make tax burden comparisons with other countries. It will be evident in the review that the tax reforms in Mexico have been made in a gradual fashion. This piecemeal approach contrasts with the reforms adopted in other Latin American countries. As Bird (1992, p. 25) has cleverly written, "Mexico's tax reform is thus best seen not as a 'response to crisis' but as an ongoing process of adjustment to changing circumstances and, to some extent, to changing intellectual fashions."

As a general reference on the structure of federal taxes in Mexico, Part A of Table 1 presents the contribution of each of the taxes since 1977. Aside from the notes in the table, it is worth noting three other points. First, the table does not follow exactly the format of presentation using regularly by the government. Second, the income taxes paid by the state oil company PEMEX are shown separated from the rest of the corporate income tax to avoid spurious comparisons over the years. And third, the reader should pay special attention to the item that we labelled "Capital Income" (*Aprovechamientos* in Spanish), since it includes the income accruing from the sale of state enterprises.

The table also presents figures on social security payments in Part B, together with figures for state and local revenue in Part C. The latter have recently gained importance, since in 1993 the main social security institution, IMSS, started to have financial problems, mostly due to bad management. As a result, the rate of social security contributions has been already adjusted twice during the nineties. Regarding the figures on state and local taxes, it is important to record them to show that the tax effort at the state and local levels is quite meager for international standards, mostly due to low taxes on land property. Curiously enough, this seems to be the first time that the state and local taxes are consolidated with the federal tax figures. This omission from the part of even the federal authorities (and the academic community) sadly exemplifies the highly centralized political structure that still prevails in Mexico.

3.1. *The Corporate Income Tax and the Tax on Gross Assets*

As noted in Section 2, the tax revenue from the corporate income tax (the *impuesto al ingreso de las personas morales*) was low during the fifties compared even with other developing countries. However, in the sixties, the tax base kept rising and the mechanisms for tax collection were improved. In the early seventies, the ambitious tax reforms planned at the beginning of the Echeverría administration ended up in simple measures such as an increase in corporate income tax rates up to 42% and an increase in the withholding tax on interest income.

The next big tax reform started in 1978, but it centered mostly on personal income taxes and the preparation for the introduction of a value added tax in 1980. The corporate income tax received only renewed attention after the crisis of 1982. Corporate taxes were partially reformed to take into account some inflation distortions,[3] and to try to incorporate sectors that until then had enjoyed special treatment (e.g., the construction industry).

Nevertheless, as shown in Table 1, the corporate income tax continued to be very low during the mid-eighties. High inflation rates, together with widespread tax evasion, accounted for this phenomenon. For instance, firms were able to decrease tax payments through the deduction of interest payments that had a high inflationary component.[4] The Olivera-Tanzi effect was also at work with monthly inflation rates exceeding 10%. All those factors prompted the government to initiate a more comprehensive reform of the corporate income tax in 1986. The first change involved a shortening of the tax collection lags by requiring monthly payments. The

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[3]The inflation adjustments were essentially allowances in the case of inventory costing, and deductions in the case of net-of-debt inflationary losses.

[4] Although, as mentioned earlier, this indebted firms were not being allowed to use depreciation deductions. So that, part of the loss in tax revenue mentioned in the text was offset by this implicit gain.

TABLE 1

TOTAL REVENUE AT THE FEDERAL AND STATE LEVELS, 1977-1993

(Percent of GDP)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
A. FEDERAL REVENUE	12.46	13.01	13.47	14.98	14.77	15.30	17.68	16.99	16.66	15.76	16.96	16.19	17.94	17.33	20.72	20.85	n.a.
INCOME TAXES PAID BY PEMEX 1/	0.99	1.15	1.48	3.66	3.82	4.67	6.49	5.75	5.89	3.65	5.09	3.42	3.49	3.78	3.58	3.35	3.13
NON-OIL TAX REVENUE	10.68	11.11	11.33	10.54	10.06	9.54	10.17	10.46	9.90	11.14	10.79	11.55	12.22	11.73	11.99	12.43	12.21
Income Tax 2/	5.07	5.72	5.65	5.15	4.96	4.30	3.86	4.12	4.01	4.22	4.03	4.71	5.09	4.81	4.97	5.52	5.56
Personal Income Tax	2.54	2.85	2.64	2.33	2.48	2.54	1.95	1.92	1.91	1.91	2.16	2.16	2.35	2.13	2.30	2.56	2.56
Corporate Income Tax 3/	2.02	2.30	2.47	2.38	2.04	1.29	1.29	1.63	1.54	1.77	1.44	2.14	2.38	2.38	2.43	2.74	2.78
Foreign Remittances & Other	0.51	0.57	0.54	0.44	0.44	0.47	0.62	0.57	0.56	0.54	0.43	0.41	0.36	0.30	0.24	0.22	0.22
Value Added Tax 4/	2.11	2.07	2.39	2.68	2.59	2.21	2.98	3.20	2.88	2.89	3.05	3.25	3.35	3.88	3.76	2.99	2.94
From Imports	n.a.	n.a.	n.a.	0.67	0.72	0.54	0.46	0.55	0.37	0.53	0.79	0.97	1.08	1.22	1.35	1.01	0.96
Excise Taxes	1.69	1.65	1.52	1.07	1.02	1.81	2.39	2.24	2.10	2.77	2.50	2.66	2.49	1.63	1.49	1.96	1.84
From Gasoline	0.57	0.53	0.47	0.38	0.34	1.18	1.55	1.53	1.38	1.90	1.68	1.74	1.57	0.75	0.81	1.24	1.12
Import Taxes	0.58	0.65	0.89	0.99	1.09	0.84	0.52	0.52	0.62	0.81	0.81	0.43	0.79	0.93	1.15	1.26	1.14
Export Taxes	0.29	0.11	0.07	0.04	0.00	0.02	0.02	0.01	0.01	0.06	0.01	0.01	0.02	0.01	0.00	0.00	0.00
Other Taxes	0.94	0.91	0.81	0.61	0.40	0.36	0.40	0.37	0.28	0.39	0.39	0.49	0.48	0.47	0.62	0.70	0.73
NON-TAX REVENUE	0.79	0.75	0.66	0.78	0.89	1.09	1.02	0.78	0.87	0.97	1.08	1.22	2.23	1.82	5.15	5.07	n.a.
Capital Income 5/	0.29	0.21	0.16	0.16	0.16	0.46	0.24	0.10	0.20	0.24	0.35	0.35	1.50	0.81	4.13	4.20	n.a.
Others	0.50	0.54	0.50	0.62	0.72	0.64	0.79	0.69	0.67	0.73	0.73	0.86	0.74	1.02	1.03	0.87	n.a.
B. SOCIAL SECURITY	2.58	2.64	2.58	2.38	2.46	2.63	2.30	2.16	2.17	2.32	2.23	2.44	2.48	2.61	2.82	2.96	n.a.
C. STATE AND LOCAL REVENUE	1.96	2.02	2.02	1.53	1.38	1.33	1.11	1.16	1.25	1.44	1.25	1.05	1.20	1.41	n.a.	n.a.	n.a.
TOTAL REVENUE (A+B+C)	17.00	17.67	18.07	18.89	18.61	19.26	21.09	20.31	20.08	19.52	20.44	19.68	21.62	21.35	n.a.	n.a.	n.a.

SOURCES: Constructed by the author using information from Dirección General de Política de Ingresos, SHCP, Quinto Informe de Gobierno (1993), INEGI, and Urzúa (1991).

1/ Excludes VAT, import taxes and excises, which are entered in Part B.
2/ To avoid spurious comparisons, the tax on phone services from 1990 on is added (as in the eighties) to the excise taxes.
3/ Includes a tax on gross assets from 1989 on.
4/ During 1977-1979 it was a turnover tax instead of a value added tax.
5/ Includes income from the sale of state enterprises.

second important change was to make adjustments to fully index the corporate income tax (firms were allowed to adopt this in a gradual fashion). This indexation scheme involved, in particular, "inflation-proof" depreciation of assets (Auerbach and Jorgenson, 1980). Finally, the (for all purposes) flat corporate income tax rate was lowered to 35% on the new tax base.

In 1989 the new Salinas administration introduced a new tax of 2% on the firms' gross assets (the *impuesto al activo*). The tax has currently (in 1994) the following features: First, it can be used as a credit on the corporate tax, so that it functions as a minimum income tax. A complete carry-back and forward between the two taxes is allowed for up to ten years. Second, it taxes gross assets. Third, it avoids cascade effects by not taxing the assets of other enterprises held by the firm. Fourth, new enterprises are exempted the first two years, and firms that are liquidating are also exempted. Finally, the financial sector is exempted as well. This exemption is presumably because most of the assets of financial firms are liabilities of other firms.

It should be noted that this tax on assets is far from being a novelty. As told by Sadka and Tanzi (1992), a variant of this tax was used in Milan in the 17th century. It is also interesting to note that a similar tax was put in practice in 1988 by the Bolivians; albeit with some problems, since by taxing net worth, instead of gross worth, the authorities lost revenue with firms which disguised bad debt.[5]

As shown in Table 1, the true fiscal effectiveness of this tax on assets can be a matter

[5] Another earlier instance was the tax on net wealth, for both firms and individuals, implemented in Colombia in the seventies (now abolished). It is interesting to note that in this case the tax on individuals was more successful than the one on firms.

of dispute.[6] The increase in 1989 of the corporate income tax effort was not large, and not even that change can be attributed entirely to the new tax, for several formerly privileged tax regimes were being eliminated at the same time. In fact, the biggest gain in the corporate income tax effort was obtained earlier, in 1988, and this mostly due to the substantial drop in inflation achieved that year (as reviewed in Section 2).

What then explains the gain, shown in Table 1, of around half of a point of GDP in the corporate income tax effort from 1989 to 1993? Mostly two factors: First, the tax base was dramatically increased by incorporating small and medium size enterprises that were previously untaxed or were enjoying a special treatment. According to the government, the number of firms incorporated to the tax system grew from 1,929,194 in 1989 to 5,602,486 in 1993. And second, the tax authorities increased sharply the number of fiscal audits (to around 5.8% of the total number of taxpayers) during the period. The effectiveness of the audits was also increased; so much that the government claims that each peso spent on audits translated into an extra collection of 46 pesos in 1993.

The last reform on the corporate income tax was made at the end of 1993. Alarmed by a lethargic growth, the government tried to stimulate the economy by decreasing direct taxes. This lead in particular to a one point decrease in the corporate income tax rate. With this change, the (flat) corporate income tax rate in Mexico is now lower than in the United States, where the top rate at the federal level was one point higher than in Mexico in 1994 (35% versus 34%), and also where the state and local taxes have always been higher.

[6] Furthermore, it is still an open question whether the tax will endure the constant criticism from the private sector. By early 1993, around 16,000 firms looked for protection from the tax by invoking *amparo*, a legal scheme that can be invoked in case of possible abuses by the authority (without success, as ruled later on by the Supreme Court).

Before closing this subsection, it is worth to draw attention to the federal government revenue accruing from PEMEX, the oil monopoly owned by the state. As can be appreciated from Table 1, its tax burden was at a peak in 1983, and, although has decreased since then to half of its value, it is still larger than the corporate income tax burden. This is so because PEMEX is heavily taxed (by means of a so-called extraordinary tax), so much that the monopoly has to depend on foreign oil sales to obtain operating profits. A point that is interesting to note is that the ups and downs in oil tax collection, shown in Table 1, are not only related to changes in world oil prices over the years, but also to variations in the real exchange rate. Given that PEMEX is a net exporter, the devaluations that took place during the stabilization processes of the eighties had a positive impact on tax revenue. Urzúa (1989) provides a detailed discussion of the fiscal importance for Mexico of the real exchange rate (and of other non-traditional variables that affect fiscal revenue).

3.2. *The Personal Income Tax*

The maximum rate for the personal income tax (*impuesto sobre la renta de las personas físicas*) was 35% at the beginning of the seventies. For reasons mentioned in Section 2, the top rate was increased to 42% in 1972, and three years later to 50%. This last reform also included, for the first time, rental income from housing as part of the income tax base.

During the tax reforms of 1978-1982, the maximum personal income tax rate was further increased to 55% in 1979, but at the same time the tax schedule was made more progressive. The net effect was a drop of the tax effort (see Table 1). Furthermore, a deduction equal to an annual minimum wage was implemented instead of some itemized deductions. This measure was actually quite progressive, since, as noted by Gil Díaz (1987, p. 337), it increased by "as much as 200 percent the amount of deductions for lower-income individuals," while reducing the amount for higher-income classes. Moreover, during the same period a crude attempt was made to "globalize" the income tax base by including capital gains, rents and dividends. However, items such as gains from transactions made by the individuals in the stock market, authorship rights, and fringe benefits were exempt.

After the crisis in 1982, the revenue from the personal income tax dropped sharply (see Table 1). This happened even though a surtax of 10% was implemented in 1983, and there were constant inflation-adjustments in the tax schedule. Widespread tax avoidance and evasion, and especially a growing underground economy, seem to be the most important causes of the fall in revenue. This deterioration persisted during the entire De la Madrid's period.

As a result, the Salinas administration focused its efforts on devising better mechanisms of tax collection, on establishing harsher penalties in the case of tax avoidance and evasion, and on trying to increase the tax base. Regarding tax enforcement, the authorities prosecuted, under some publicity, several high-profile tax evaders. The authorities also tried to widen the income tax base by simplifying the tax regime in the case of small contributors, and by eliminating existing exemptions.[7]

As shown in Table 1, the personal income tax effort did increase in the late eighties and early nineties due to those measures. Nevertheless, the tax effort level in 1993 was still below the one prevailing in the late seventies, partly because of the much publicized reduction of

[7] Despite these efforts, disparity in tax treatment continued to exist. For instance, the government tried to incorporate in 1993 authorship rights in the income tax base (unsuccessfully after a very loud opposition by the Mexican writers), yet the exemption on profits realized by individuals in the stock market (huge during that year) was never into question.

personal income tax rates during the Salinas administration. Regarding this reduction, it should be noted that it mostly benefited individuals in high-income brackets, rather than the "captive" wage-earners that constitute the bulge of individual taxpayers. In fact, Urzúa (1994b) shows that the distributional tax progressivity indices corresponding to the Salinas period (prior to the tax reform in 1993) do *not* compare favorably with the ones for the eighties.

As in the case of the corporate income tax rates, the personal income tax rates were also lowered at the end of 1993 trying to stimulate the economy. The biggest beneficiaries of this reform were low-income wage earners, since for them there could be even, for the first time in Mexico, a negative income tax.[8] Whether this new tax rates are sustainable in the long-run can be, unfortunately, a motive of dispute (see the last section).

3.3. *The Value Added Tax*

The value added tax on consumption of domestic goods and imports was introduced in 1980. It substituted the *impuesto sobre ingresos mercantiles* which was a turnover tax on each of the stages of production. Its introduction simplified the tax system, which was its main purpose, rendering over 25 federal taxes and 300 local excises obsolete. The basic VAT rate was set at 10%; the exceptions were a zero rate for some basic agricultural products and a basket of foodstuffs (enlarged in 1991), and a 6% rate on goods along the northern border (to be competitive with US sales taxes). Although the basic rate was too low to have a revenue-neutral reform (note the drop in Part C of Table 1), the government chose it to make the

[8] To give an example, a worker earning the monthly minimum wage in Mexico City at the end of 1993 (433.81 *nuevos pesos*), would end up receiving that month, after computing taxes and credits, around 9% of its salary.

introduction of the VAT more palatable to the private sector. As mentioned earlier, there had been strong opposition to the introduction of a VAT in the mid-sixties, with the private sector arguing that it was inflationary. Interestingly enough, Tait (1990) has reported that Mexico was one of the few countries in his sample where the introduction of the VAT led to a change in the inflation rate (not a shift in the price level).[9]

After the crisis in 1982, the need for revenue made the new De la Madrid administration increase the basic VAT rate to 15% in 1983. Concerning the exceptions mentioned earlier, the tax authorities added this time a 6% rate on medicines and most food items, and a 20% rate for some luxury goods. All of this explains the jump of VAT revenue in that year (see Table 1).

During the Salinas administration there were two additional changes in the VAT: In 1990, its collection passed from the hands of the states to the federal government, which had argued all along that the states were not putting enough effort in tax collection. Judging from the numbers in Table 1, the federal government was probably right.

A second change took place in November 1991, when the VAT basic rate was decreased from 15% to 10%, a rate that now applies to all luxuries and all transactions along the border. At the same time, the government increased, among other things, the price of gasoline and electricity by 55% and 15.3%, and established a mechanism of monthly price adjustments. As a consequence, VAT collection fell in 1992 compared to 1991; this drop represented around .77 points of GDP, and was not completely offset by the increase in energy prices (see Table 1). As it is suggested in a CGE exercise by Sobarzo (1994), not only there were not large (static)

[9] Since the economy was then growing in a stable way, and the inflation rate in 1981 turned to be lower than in 1980, it is not obvious how to disqualify Tait´s conclusion.

effects on tax revenue from this reform, but also there were no important allocation effects on the production side as well. However, what about the impact of this reform on social welfare? It is shown in Urzúa (1994a), by means of an estimated complete demand system using survey data for 11531 households, that the welfare impact was slightly favorable to high-income groups.

Before concluding with this subsection, we can note the VAT effort has not improved much during the years. In fact, as shown in Table 1, the VAT collection from consumption of domestic (not imported) goods was lower in 1993 than in 1980, the year of its introduction.

3.4. *Other Taxes*

Even since the fifties and sixties, the revenue from taxes on imports, not to speak of exports, has been relatively unimportant in Mexico, as compared to other Latin American countries. The reason was the high degree of protection that the Mexican economy had until the mid-eighties, coupled with the sudden trade liberalization that ensued. As shown in Table 1, except for an outlier in 1980, it is only in the nineties that taxes on imports account for more than one percent of GDP (due to a sharp deterioration in the balance of trade). It is also worth noting that the process of trade liberalization that started in the mid-eighties did not have a significant impact on tax revenue from imports, since although this liberalization represented a direct fiscal loss due to the reduction in tariffs, the effect was not very large because most of the liberalization entailed the conversion from non-tariff barriers to low tariffs.

Excise taxes, on the other hand, have played a more active role. As shown in Table 1, and as one would have surmised, excise taxes tend to lag behind in the good times and tend to be heavily used in the bad times. It should be noted that, together with the introduction of the

VAT, these taxes were changed to an ad-valorem basis in 1980, so that the high inflation during the eighties does not explain the variations in revenue from excises. Rather, the cause lays on government behavior: Since the seventies, the government has tended to use the prices of goods produced by the public sector as anchors to control inflation. The price of gasoline constitutes perhaps the most dramatic example of that (see Table 1).

Low public tariffs are also a consequence of the perennial industrial policy that calls for subsidizing the domestic use of hydrocarbons and electricity. That behavior has brought, of course, some negative consequences. One is, as mentioned in Section 3, the weak financial position of PEMEX. The financial problems of the electric utilities and the train system are also exacerbated by their low public tariffs. Furthermore, the energy subsidies obviously bias upwards the use of energy. In particular, low gasoline prices have encouraged the intensive use of automobiles, which are one of the main causes for the heavy pollution in Mexico City and other large cities. During the early nineties, many Mexican economists, and others (see, e.g., World Bank, 1992), called for a sharp increase in gasoline prices as the only immediate way to curb down the ever increasing use of automobiles. However, the Salinas administration, mesmerized by its goal of reaching a single-digit inflation rate, never followed suit.

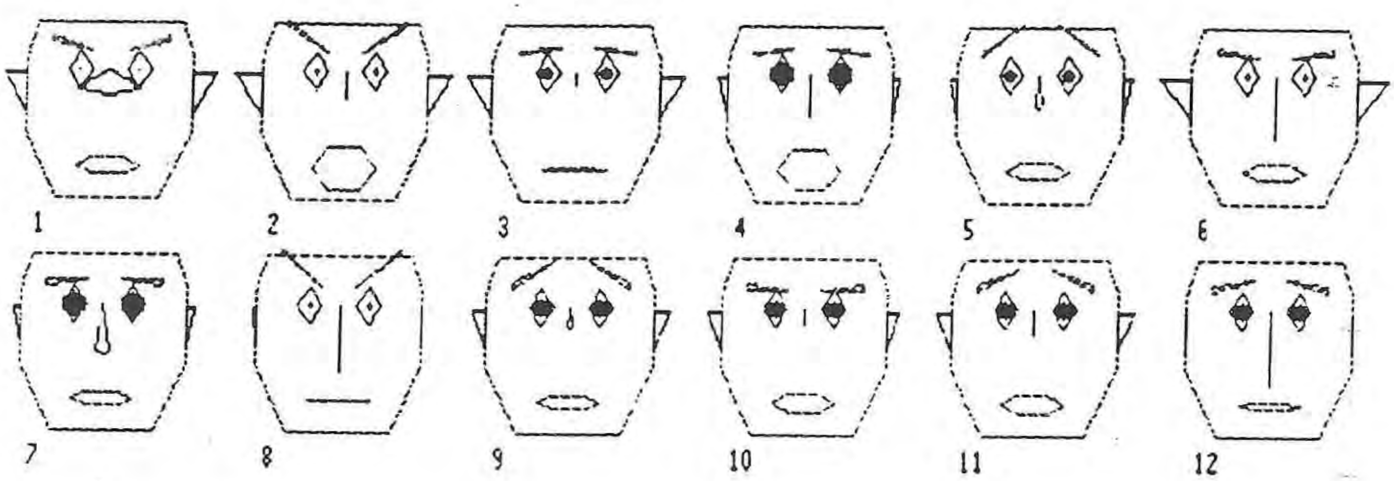
3.5. *An International Comparison of the Tax Burden*

It is always a sobering exercise to make comparisons between countries. Figure 2 compares the tax burden in the case of six Latin American countries, together with two Asian and one African.[10] Rather than presenting the multivariate data in table form, the figure uses,

[10] Except for Brazil, Chile and Costa Rica, all the other countries have chapters dedicated to them in this volume.

FIGURE 2

TAX BURDEN FOR SELECTED COUNTRIES
(Proportion of GDP)



COUNTRIES

1. Argentina (1988)	7. Cote d'Ivoire (1990)
2. Argentina (1992)	8. India (1990)
3. Brazil (1989)	9. Mexico (1980)
4. Chile (1988)	10. Mexico (1988)
5. Colombia (1990)	11. Mexico (1991)
6. Costa Rica (1991)	12. Philippines (1991)

TYPE OF TAX	FACE FEATURE
Income tax	Iris size
Social security	Ear width
VAT or Sales tax	Mouth open amount
Excises	Brow slant
Import taxes	Nose length
Export taxes	Nose width

Sources: Constructed by the author using information provided by participants in the IDRC project, and, for the case of non-participants, consolidated central government data in IMF (1992).

following Chernoff (1973), face features to represent the effort of six different taxes (including social security). Although we have never seen the use of Chernoff's faces in this context, or in any other economic context for that matter, they seem to be tailored made for our purpose.

We invite the reader to take a close look at the figure. Among the most outstanding features, one can cite the remarkable turn around in the tax structure of Argentina during the last years; the large value added tax burden in the case of Chile (and Argentina today); the notably regular face features in the case of Cote d'Ivoire; and the large excise taxes in the case of India. The three faces corresponding to Mexico show quite regular features, except for the low trade tax effort explained earlier; furthermore, the three faces are quite similar, even though there have (supposedly) been several significant tax reforms since the last decade.

3.6. *Other Fiscal Issues*

Three fiscal issues have recently gained importance in Mexico: the privatization of public enterprises, fiscal federalism (or the lack of it), and tax compliance. The first is perhaps the most interesting of them. At the onset of the debt crisis in 1982, the Mexican federal government owned 1155 enterprises (see Table 2). By mid-1993, this number had been decreased to 259, out of which 50 were in the process of being sold. What were the reasons behind this privatization drive? Efficiency goals and/or ideological reasons are the typical answers that are given to explain the privatization wave that has swept around the world since the eighties. Yet, it seems that the most important explanation in the case of Mexico is a fiscal reason. In the eighties the economy was burdened by a huge domestic debt, for which the nation had to even make in 1988 interest payments that were five times larger than the ones paid for the foreign debt (see next section). Thus, although the government has claimed in the last years that the sales revenue, shown in Table 1, was going to be put in a "contingency fund", the largest part of it has gone to retire domestic debt.

Given the number of enterprises that were sold, it is a daunting task to examine in depth the privatization process in Mexico.[11] As a general comment one can say that, with some exceptions (e.g., the sale of TELMEX), and some instances of "gift-seeking" to use the happy expression coined by Spraos (1992), the process of selling was accomplished quite well, and with a minimum of bureaucracy.

TABLE 2

NUMBER OF STATE-OWNED ENTERPRISES
(At the end of each year)

1982	1155
1983	1090
1984	1044
1985	955
1986	807
1987	661
1988	618
1989	549
1990	418
1991	328
1992	270
1993*	259

SOURCE: Quinto Informe de Gobierno (1993).
NOTE: The table only includes federal enterprises.
* Middle of 1993.

Whether the same good marks can be given to the privatization outcomes, it remains an open question. At this point one can only provide anecdotal references. For instance, while one

[11] Núñez Melgoza (1993) provides a good start. For general issues on the Latin American privatization processes see Sáez and Urzúa (1994).

of the two privatized airlines has fared pretty well (Aeroméxico), the other has fared pretty badly (Mexicana). While the balance sheets of the privatized steel companies are improving, the privatized sugar mills are in deep trouble. And the now privatized phone company, TELMEX, happily continues to use its monopoly power to extract rents from the consumers.

Turning to the second fiscal issue, we can start noting that "decentralization" has become a sexy, all-purpose word in Mexican politics since the eighties. Since Mexico is *de jure* a federal republic, it would seem unnecessary in foreign eyes to even talk about decentralization. Yet, the central government in Mexico has *de facto* great ascendance on the states and municipalities. Many reasons have been given to explain this phenomenon; for instance, Mexico's colonial heritage, its dominant catholic religion, and its semi-authoritarian and corporativist political structures. The fact is that, as noted by Gershberg (1990), the share of public spending that is controlled by the federal government is way out of line in comparison with the shares in other federal republics such as the United States and Germany (and, one can surmise, Brazil and Argentina).

Local governments are granted as sources of revenue the property tax, federal "participations", and income from public services. They are in turn responsible for providing local public goods such as streets, water supply, public security, etc. The most important revenue sources, however, are federal participations,[12] which include mostly the sharing of revenue out of federal taxation, except for the oil revenue, reserved for the federal government, that comes from the application of the "extraordinary" oil tax. The funds are not given directly to the municipalities, but rather to their states which then distribute them. State governments

[12] For an excellent discussion of the issues of federal-state transfers in Mexico see Boadway (1990).

are also the ones that, in effect, administer local taxes. Thus, the centralization features that dominate at the federal level also appear at the state level.

What is more worrying, however, is the fact that public expenditure is also tightly controlled by the federal and state governments, letting the municipalities with little to say on issues such as social spending. To give the reader an idea of the degree of centralization, it should be noted that by 1992 the federal government's National Solidarity Program, mentioned above (and below), had already surpassed more resources to spend than all the municipalities put together.

Let us now turn to the last fiscal issue: Tax compliance. As noted earlier, during the Salinas administration, and contrasting with the mild stand taken by former administrations, the tax authorities decided to attack tax evasion. This was reflected by the sharp increase in the number of fiscal audits, and of tax evasion cases brought to court during the early nineties. Another mechanism that seems to have been effective was the enforcement of government-approved cash registers (the *máquinas registradoras de comprobación fiscal*) in 1992, much in the same way as in some European countries.

A comment before concluding with the tax compliance issue. It has been repeatedly said that one of the reasons for the recent increase in personal income tax collection in Mexico is the perception by the general public of a more efficient and honest burocracy. This, I am afraid, can be disputed. Corruption among some government officials, at all levels, is alive and well. The private sector organized in April 1992 a so-called "National Convention of Taxpayers" in which some groups planned to request an amendment to the Constitution to protect the rights of the taxpayers. Although the proposal never prospered, it is worth extracting among their nine basic petitions the first of them: any private person or organization should be able to audit any public office or enterprise.

4. CHANGES IN THE COMPOSITION OF GOVERNMENT EXPENDITURES

In the analysis of government expenditures, Table 3 presents the most important spending items in the case of the federal government. During the eighties, the greatest spending shares corresponded to the already mentioned interest payments on domestic debt. The importance of this item has been greatly reduced in the nineties, for reasons already given in the last section.[13] The second greatest share corresponded to current transfers, payments from the federal government to public enterprises to cover their operating costs (these payments include the ones to Mexico City, which is a federal district, and the ones to the social security institutions). Given the privatization process in recent years, this item has also lost part of its importance (see Table 3). Finally, the third largest spending share corresponded, and still does, to wages and salaries paid to the burocrats in the federal government. This last item is also the most important one at the level of states and municipalities.

4.1. *Public Capital Investment*

The composition of government spending on capital goods has changed considerably in Mexico over the years. During the López-Portillo administration, public investment reached a

[13] As can also be noted from Table 3, the interest payments on foreign debt were never as important as the ones on domestic debt. Regarding the former, they lost part of their importance (in the case of Mexico) due to, both, low world interest rates, and the implementation of the Brady plan of debt reduction at the end of the eighties.

TABLE 3

TOTAL EXPENDITURES OF THE FEDERAL GOVERNMENT, 1977-1992

(Percent of GDP)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
TOTAL EXPENDITURES	15.80	15.87	16.77	18.29	21.79	27.55	25.95	24.11	24.42	29.06	31.27	26.47	22.81	19.98	17.27	15.87
CURRENT EXPENDITURES	12.34	12.41	12.59	13.58	15.30	22.23	22.13	21.11	20.76	25.35	28.03	25.30	21.17	17.29	14.56	13.62
Wages and Salaries	4.12	3.97	3.90	3.55	3.67	4.07	3.24	3.39	3.27	3.14	3.26	2.85	3.03	2.71	2.90	3.25
Interest Payments	1.85	1.92	1.87	1.72	2.84	5.26	8.53	8.01	8.45	13.58	17.57	15.19	11.30	8.36	4.90	3.45
Domestic	1.12	1.09	1.15	1.23	2.29	4.14	6.36	6.15	6.57	10.93	14.49	12.62	8.89	6.68	3.11	2.11
External	0.73	0.83	0.72	0.49	0.55	1.12	2.17	1.86	1.88	2.65	3.08	2.58	2.41	1.69	1.79	1.34
Participations to States	1.44	1.51	1.60	2.28	2.50	2.23	2.79	2.86	2.69	2.58	2.66	2.85	2.83	3.02	3.09	3.19
Current Transfers	4.19	4.19	4.37	5.04	4.71	5.14	5.58	4.48	4.52	4.15	3.30	2.83	2.50	1.99	2.42	2.47
Others 1/	0.74	0.82	0.85	0.99	1.58	5.52	1.98	2.37	1.83	1.89	1.24	1.57	1.51	1.21	1.24	1.25
CAPITAL EXPENDITURES	3.93	3.94	4.28	4.53	6.22	4.85	3.81	3.23	3.78	3.55	3.21	1.93	1.96	2.66	2.27	2.25
Public Investment	1.32	1.22	1.24	1.52	1.46	1.48	0.78	0.85	0.91	1.00	0.90	0.53	0.51	0.84	1.04	1.04
Capital Transfers	0.76	0.62	0.91	2.28	3.93	2.52	2.28	1.83	2.27	1.92	2.17	1.26	1.28	1.66	1.09	1.08
Others 2/	1.85	2.09	2.14	0.73	0.82	0.86	0.75	0.54	0.60	0.63	0.13	0.14	0.16	0.16	0.14	0.14
ADJUSTMENT (-) 3/	0.47	0.47	0.10	-0.17	-0.27	-0.47	-0.02	0.22	0.13	-0.15	-0.03	0.76	0.32	-0.03	-0.44	-0.03
MEMORANDA:																
SOCIAL EXPENDITURES	7.84	7.91	8.37	8.06	9.19	9.13	6.66	6.70	6.94	6.66	6.21	6.08	6.17	6.47	7.71	8.52
ANNUAL CHANGE IN THE STOCK OF REAL DOMESTIC PUBLIC DEBT (%)	-7.27	8.21	22.86	11.57	20.10	103.18	-36.04	-13.15	16.98	35.96	26.81	-36.06	-6.34	-2.96	-27.88	-30.24
ANNUAL CHANGE IN THE STOCK OF REAL EXTERNAL PUBLIC DEBT (%)	9.88	6.44	1.77	0.15	41.77	4.88	2.86	6.42	0.38	2.59	4.15	-4.41	-10.41	-2.91	-1.36	-7.76

SOURCES: Constructed by the author using information in Indicadores Económicos, Banco de México.

1/ It includes acquisition of goods, expenditures carried over from the last fiscal year, etc.

2/ It includes capital expenditures carried over from the last fiscal year, and other transactions.

3/ Net deficit with other public entities.

record high (see Table 3), since it was seen as a key ingredient for long-term growth, and the government had money to paid for it. During the De la Madrid administration, however, public investment fell drastically as the stabilization adjustments took place: Capital investment by the federal government was at the end of 1988 four times smaller as a percentage of GDP than in 1981 (admittedly a year of high spending). It is only within the last years that public investment has started to grow once again, although not at a rate that many would wish.

The reason for such variations in public capital spending is, of course, that in Mexico, as in many other countries, the less politically damaging budget cuts can be made precisely in public investment. This fact, however, has not deterred some countries to leave untouched public investment, and even use it as a countercyclical tool. The successful stabilization policies followed in Chile during the early eighties constitute an example.

4.2. *The National Solidarity Program*

According to the 1989 Income and Expenditure Survey (INEGI, 1992), one out of four Mexican households are below the poverty line (defined by an income of less than two minimum wages). Furthermore, the distribution of income worsened sharply from 1984 to 1989, a period where very stringent stabilization adjustments took place. To give the reader an idea of the magnitude of the redistribution, one can note that the income share of the highest decile rose from 33 to 38 percent just during that five-year period (a one percent gain per year!).

The *Programa Nacional de Solidaridad* (PRONASOL), the National Solidarity Program, was created by President Salinas with the main objective of attacking extreme poverty. One of the novel features of this social program was that it took great pains, at least on paper, on identifying the neediest, and on making the recipients active participants in the social projects.

At the beginning of 1994, an armed upheaval in Chiapas, a very poor southern state with half of the population indian, reminded all Mexicans about several serious social problems that still remain to be solved, such as an extremely unequal income distribution and blatant race discrimination. The upheaval also brought into question the true effectiveness of PRONASOL. Although Chiapas had been one of the largest beneficiaries (in absolute terms) of the program among all Mexican states, the meager results obtained so far have made most observers to put a question mark on it. In particular, some critics have argued that PRONASOL has been, at the end, just a clever program to attract more voters to the dominating party, while others have blamed its partial failure to bad administration.[14]

4.3. *An International Comparison of Government Expenditures*

Before concluding this review, and in order to have some points of reference for the future, Figure 3 presents, using once again Chernoff's faces, a comparison among six countries of their central government expenditures. There are many interesting features that the reader is invited to discover in the figure. As a single comment, however, one can observe that, as opposed to Figure 2, the features of the Mexican face in Figure 3 are not, compared to other countries, as bright as one would like them to be.[15]

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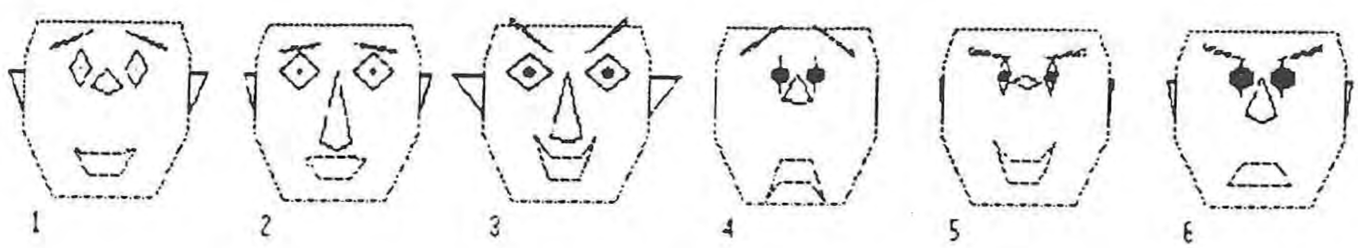
[14] García Rocha and Guevara (1992) show that the amount of money from PRONASOL that went to each state from 1989 to 1991 seemed to be more correlated with administrative and political factors than with the effective number of people living under extreme poverty.

[15] Although note that, for purposes of uniformity with other countries, we have chosen as the reference year 1989, rather than later years when social expenditures did increase significantly (see Table 3).

FIGURE 3

EXPENDITURE BY FUNCTION FOR SELECTED COUNTRIES
(Proportion of GDP)



COUNTRIES (1989)

1. Argentina	4. India
2. Brazil	5. Mexico
3. Costa Rica	6. Philippines

TYPE OF EXPENDITURE	FACE FEATURE
General Public Services	Nose length
Defense	Mouth smile (if low)
Public order & safety	Ear width
Education	Brow slant
Health, soc. sec. & welfare	Eye vertical width
Economic affairs & services	Iris size

Source: Constructed by the author using consolidated central government data in IMF (1992).

5. CONCLUSIONS AND SOME DIRECTIONS FOR FURTHER WORK

Given our review, it would seem fair to draw as a general conclusion that the recent tax reforms in Mexico have had varying success. On the one hand, we have noted in Section 3 the increase in the corporate income tax effort, mostly as a result of low inflation, a much wider tax base, and better tax enforcement. On the other, we have also pointed out that VAT collections are still low, and that the current VAT effort in the case of consumption of domestic goods is even lower than in 1980.

Although it is true that the tax authorities were able to achieve during the most recent years a reduction in tax rates without eroding tax collection, we can also make here two qualifications. First, even though at first sight the lowering of most rates would seem to imply that the Mexican tax system is now much more efficient and progressive (as Altimir and Barbera, 1991, argue), the work by Sobarzo (1994) show that the allocative effects of the reforms have not been significant, and our own work (Urzúa 1994a,b), mentioned in Section 3, suggest that the welfare effects have not been as progressive as they seem. And second, most of the tax reductions does not seem to be sustainable in the long-run. The current tax effort in Mexico is not only still low for international standards, but also it seems to be insufficient given the current political events in Mexico that point toward more social expenditures in the future, more public investment (given the low current level of private investment), and a weaker control by the executive of spending decisions (as the legislative branch and the state and local governments gain more power). Needless to say, this topic needs urgent study.

Regarding less traditional fiscal issues, we can point out four that in our judgment also deserve study: First, as noted earlier, a good tax system at the state and local levels is still lacking; states and municipalities have not learned to tax land and price public services. Second, a reform in the procedures of federal-state transfers and federal-state expenditures is overdue, specially now that the country will have to become more open and democratic. Third, the recent financial troubles of the social security system call for some drastic reforms. And fourth, a serious and open evaluation of the successes and failures of the National Solidarity Program is much needed.

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