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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 almost 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.

The purpose of this paper is to recount some of these recent economic developments in Mexico, putting emphasis on the examination of the fiscal policies that have been pursued in the last fifteen years. The paper will review and assess recent tax reforms in Mexico, and it will also examine the significative changes in the pattern of government expenditures that have taken place during the last three presidential regimes.

Space limitations force us to focus on fiscal issues alone; in particular, we will not be able to talk about recent monetary and exchange rate policies in Mexico, nor about recent commercial policies. Furthermore, the same limitations make us unable to touch upon several problems that seem still to lay ahead for Mexico. The following four examples give an idea of the obstacles that Mexico still needs to overcome: First, the economic adjustment that the country has endured since 1982 has worsened its income distribution, which was already very unequal before the crisis. Second, domestic private savings continue to be quite low. Third, the burden of foreign indebtedness still persists. And fourth, the trade deficit is reaching worrisome proportions since the exchange rate, used as a nominal anchor during the last stabilization process, is not well aligned.

The plan of the paper is as follows: Section 2 provides a brief account of the recent evolution of the Mexican economy as a whole. 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 tax efforts. Section 4 then reviews the recent privatization of public enterprises, and the issues of fiscal federalism and tax enforcement. And, finally, Section 5 examines recent changes in the composition of government expenditures; it studies in particular public investment and social expenditures, and it presents an international comparison of expenditures by function.

2. A BRIEF ACCOUNT OF THE MEXICAN ECONOMY

This section provides a quick overview of the most important macroeconomic events that have taken place in Mexico during the last fifteen years (1977-1992). This period covers the regimes of the last two former presidents, López Portillo and De la Madrid, together with the first four years of President Salinas's current mandate. Given our main interest, the emphasis will be given in recounting fiscal reforms, although we will draw attention from time to time to other major economic reforms.

The section starts mentioning two important stages in the economic development of Mexico that took place during the years of 1950-1970 and 1970-1976. The rest of the section reviews the evolution of the Mexican economy in the last fifteen years. This review is divided in three 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.

2.1. *Stabilizing Development and Shared Development*

Our brief review can not be complete without mentioning, at least in passing, two key periods in the modern history 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 economic growth (the average real growth rate from 1950 to 1970 was grater than 6%), and a remarkable stability of prices.

It is worth noting that during those years tax revenue was, as one would expect given the stage of development of Mexico, mostly dependent on indirect taxes (a turnover tax, import taxes, and excise taxes). The tax effort 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 in government expenditures 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 economic and (some) 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 abrupt changes.

Thus, as it was also common 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 in a superb way 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 tax reforms (see Solís, 1981).

Expenditures, on the other hand, grew fast. In fact, during President Echeverría's mandate, federal government expenditures as a proportion of GDP went from 24% in 1970 to 38% in 1976. It is also interesting to note that during this period 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 already mentioned constraint on tax revenue, the government had to rely heavily on foreign borrowing (which increased more than four times during the period), domestic borrowing, and the 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.

2.2. *The López Portillo Period: 1976-1982*

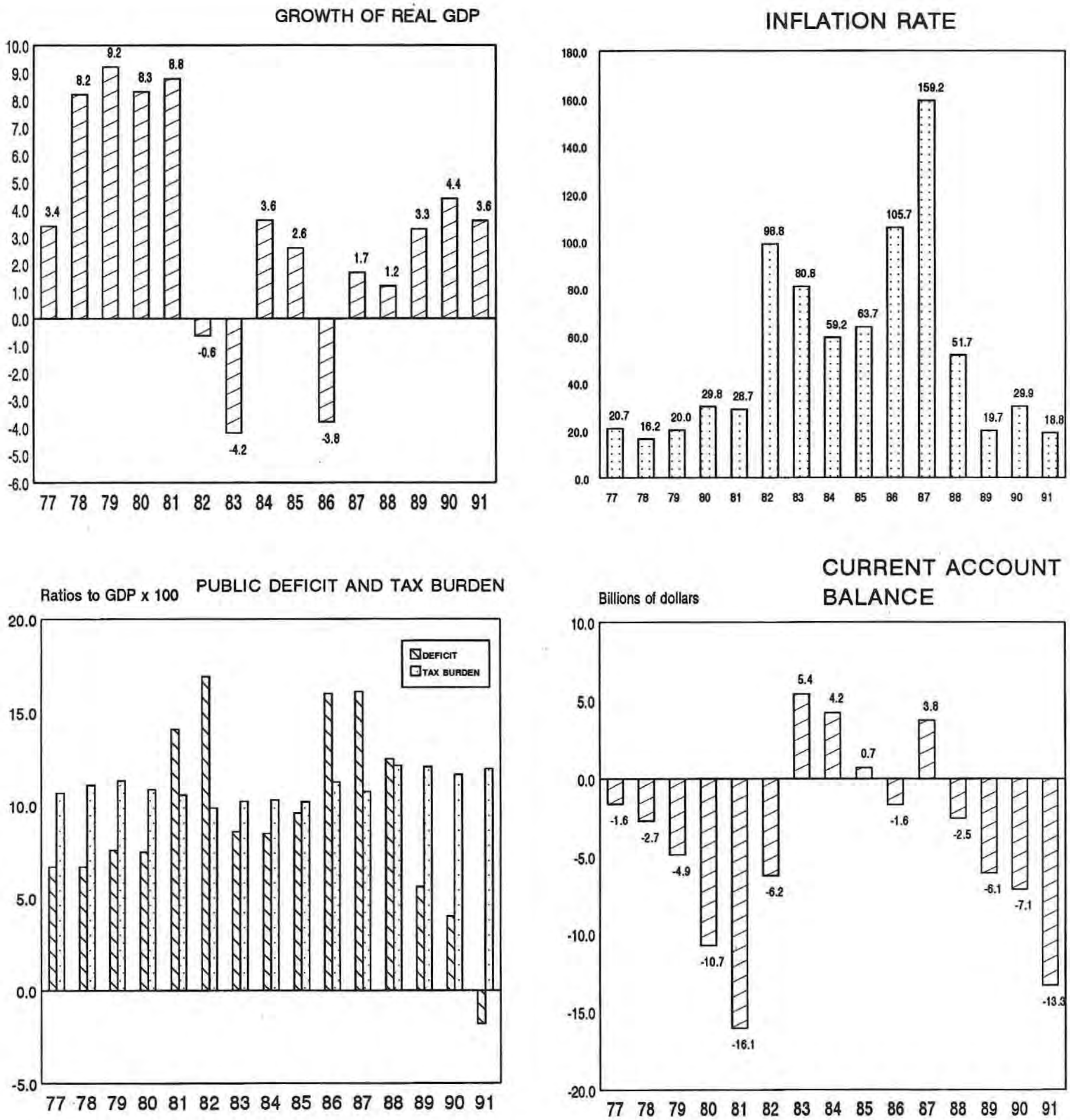
These years can be usefully divided into three sub-periods. The one going from the end of 1976 to the end of 1977, when stabilization took place under a stand-by agreement with the IMF. The second one, that lasted until the beginning of 1981, when oil discoveries and easy foreign credit helped to break 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 did what almost every one does under the circumstances: they tightened expenditures. However, very soon the constraint in 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 also 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 the first part of Figure 1. As can be appreciated from the figure, in the first years of the recovery inflation was moderate and the increase in government expenditures 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, a tax that had been strenuously opposed by the private sector in the sixties. As we will review in the next section, the VAT substituted a turnover tax, together with numerous federal and local taxes on consumption. The VAT basic rate for most of the goods was set at 10%.

FIGURE 1

EVOLUTION OF THE MEXICAN ECONOMY



Sources: Indicadores Económicos and Table 1 below.
Note: Public deficit is not inflation adjusted. Tax burden only for the non-oil sectors.

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 in the Eurocurrency market. The new loans ended up being used to finance, first, the rapidly increasing trade deficit; second, the burgeoning capital 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 foreign interest payments that were increasing as the world interest rates started to climb up.

Public expenditures grew very fast in the early eighties (and with them the stock of domestic debt). 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). The number of public enterprises was quite large: 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. These were nationalized the day of the last presidential address in 1982.

As can be appreciated from Figure 1, the public and trade deficits were 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 has 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.

2.3. *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 goods produced by the government, and a deep cut in government spending.

In 1983 the basic rate for the VAT was increased to 15%, and the personal income tax was increased by a surtax of 10%. Excise taxes were also increased. As shown in Figure 1 above, the increase in taxes, together with a sharp reduction in government expenditures (specially capital expenditures) and a devaluation, started to grow fruits soon: After a quite large 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 quite large external shock when the world oil prices collapsed. The drop in oil revenue (and an increase in expenditures due to an election year) had an immediate effect on the public deficit and the current account, as shown in Figure 1. By 1987 Mexico was experiencing a record annual inflation rate of 159%, and the peso was suffering speculative attacks.

All those factors made the government to implement, at last, an heterodox-orthodox stabilization program called the Economic Solidarity Pact (*Pacto de Solidaridad Económica*) in December 1987. After reaching a consensus 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 an anchor, a very restrictive fiscal policy, 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.

As a way of summary, the following four points can be made about the fiscal reforms that took place in those years: First, as a consequence of the already mentioned increase in the VAT, and of more frequent price adjustments of the goods produced by the public sector, the revenue from indirect taxes rose as a proportion of GDP during the period. The same cannot be said, however, in the case of direct taxes (see next section). Thus, although the tax reforms during this period were mostly successful, it is likely that they were also regressive.

Second, it was during this period that state-owned enterprises started to be sold. The number of public enterprises owned by the federal government was almost halved during President De la Madrid's regime. It should be noted, however, that most of the privatized enterprises were small- and medium-sized (and most sales were also non-controversial in the eyes of the public).

Third, the current account started to be liberalized in the middle of the decade. Although this represented a direct fiscal loss due to the reduction in tariffs, the effect was not very large, since most of the liberalization entailed the conversion from non-tariffs barriers to low tariffs.

And, fourth, government expenditures were slashed significantly during these years. The most conspicuous cut was on capital investment which by the end of 1988 was, as a percentage of GDP, four times smaller than in 1981 (admittedly a year of high spending). It is also important to note that there were also cuts on social expenditures, a factor that certainly contributed to the social cost of the stabilization processes (see Section 4).

2.4. *The Salinas Period: 1989-1992*

During the first four years of his mandate, President Salinas has implemented major economic reforms that would have appeared unthinkable only few years before: There have been quite stringent and sustained fiscal and monetary policies during the period. There has been a continuation of a privatization program that ranks as the largest (in terms of enterprises sold) in the Western world. There is an ongoing initiative for a free trade agreement with the United States and Canada. And, finally, there has been an agrarian reform that has, in effect, 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, except for the ballooning current account deficit, positive: the economy has grown at a moderate pace while the inflation rate is being kept at a moderate level. The tax effort has increased after the application of some successful reforms (see below). Finally, the public deficit has been finally controlled. Even if one does not take into account the product of the sales of the public enterprises as in Figure 1, the inflation-adjusted public deficit turned into a surplus in 1992.

The tax system has been frequently revised during the Salinas administration. Perhaps the most important goal pursued by the reforms has been to lower the income tax rates to make them comparable to the ones in United States, while keeping constant at the same time tax revenue. This has been accomplished by widening the tax base and devising new mechanisms to increase tax compliance. It is interesting to note that in 1989 a new kind of tax that proved to be quite effective was introduced: a tax of 2% on physical and financial gross assets was imposed on firms (a full description is given in the next section). By taxing tangible assets the government was able to improve the collection of the corporate income tax, since the gross asset tax can be used as credit against the income tax.

Another recent tax reform that deserves special mention is the reduction, in November 1991, of the basic rate of the VAT. It was lowered to 10%, which was the original level when this tax was first introduced in 1980. This reduction was accompanied by an increase in the prices of oil and gasoline.

Turning to other fiscal aspects, the state-owned enterprises, as mentioned earlier, have continued to be sold. The number of them still owned by the state dropped to 221 by September 1992. The ones that were privatized included several very profitable, like the commercial banks and the phone monopoly. The only big enterprises that apparently will remain on 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", at the end the money has been mostly used to reduce the overhang of domestic debt (see Section 5).

On the other side of the balance sheet, the Salinas administration has continued to pursue stringent expenditure policies. Government capital investment continues to be low, and, furthermore, the administration is now actively pursuing a decrease in current expenditures by mean of a reduction in the number of employees in the federal government. The only items that have increased significantly over the last years are the ones corresponding to social expenditures. In particular, the so-called National Solidarity Program, which was created at the beginning of the Salinas mandate with the main objective of attacking extreme poverty, has been drawing ever increasing funds (see Section 4 below).

3. RECENT TAX REFORMS IN MEXICO

In this section we will review 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 contrast with the ones 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, Table 1 presents the contribution of each of the taxes from 1977 to 1991. It also presents social security payments as a percent of GDP. In order to avoid repetitions, we refer the reader to the notes in the table. Note that its content is the traditional one, except perhaps for the fact that the income taxes paid by the state oil monopoly PEMEX are shown separated from the rest of the corporate income tax to avoid spurious comparisons over the years.

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

As noted in the last section, the tax revenue from the corporate income tax (the *impuesto al ingreso de las personas morales*) was low, compared even with other developing countries, during the fifties. It kept rising, however, in the sixties as the tax base kept increasing and the mechanisms for tax collection were improved.

TABLE 1

TOTAL REVENUE OF THE FEDERAL GOVERNMENT, 1977-1991

(Percent of GDP)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
TOTAL REVENUE	12.47	13.00	13.46	15.30	15.26	15.64	17.79	16.88	16.86	16.00	17.10	16.83	17.91	17.34	20.83
INCOME TAXES PAID BY PEMEX 1/	0.99	1.15	1.48	3.66	3.82	4.67	6.55	5.79	5.78	3.76	5.27	3.46	3.57	3.84	3.64
NON-OIL TAX REVENUE	10.68	11.10	11.32	10.85	10.56	9.87	10.22	10.30	10.21	11.27	10.75	12.15	12.09	11.65	11.97
Income Tax	5.08	5.72	5.65	5.52	5.53	4.74	4.06	4.12	4.06	4.25	3.97	5.00	5.14	4.86	5.05
Personal Income Tax	2.54	2.85	2.64	2.33	2.48	2.54	1.95	1.92	1.91	1.97	1.90	2.17	n.a.	n.a.	n.a.
Corporate Income Tax 2/	2.02	2.30	2.47	2.75	2.61	1.73	1.49	1.63	1.59	1.74	1.64	2.34	n.a.	n.a.	n.a.
Others	0.51	0.57	0.54	0.44	0.44	0.47	0.62	0.57	0.55	0.54	0.43	0.48	n.a.	n.a.	n.a.
Value Added Tax 3/	2.11	2.07	2.39	2.68	2.59	2.21	3.03	3.20	3.12	3.15	3.25	3.60	3.38	3.92	3.93
Excise Taxes	1.69	1.65	1.51	1.07	1.02	1.81	2.39	2.24	2.16	2.76	2.52	2.80	2.51	1.65	1.46
Gasoline	0.57	0.53	0.47	0.38	0.34	1.18	1.55	1.53	1.43	1.89	1.70	1.87	1.59	0.76	0.79
Others 4/	1.11	1.11	1.04	0.69	0.68	0.63	0.85	0.72	0.73	0.87	0.82	0.93	0.92	0.89	0.66
Import Taxes	0.58	0.66	0.89	0.99	1.09	0.84	0.46	0.48	0.64	0.80	0.76	0.45	0.75	0.92	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
Other Taxes 5/	0.94	0.91	0.81	0.55	0.33	0.25	0.25	0.26	0.23	0.24	0.24	0.30	0.29	0.29	0.39
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	2.25	1.84	5.23
Capital Income 6/	0.29	0.21	0.16	0.16	0.17	0.46	0.24	0.10	0.20	0.24	0.35	0.35	1.51	0.82	4.19
Others 7/	0.50	0.54	0.50	0.62	0.72	0.64	0.79	0.69	0.67	0.73	0.73	0.87	0.74	1.03	1.04
MEMO: SOCIAL SECURITY 8/	3.26	3.15	3.16	3.01	3.25	3.05	2.66	2.56	2.62	2.59	2.52	2.52	2.86	2.85	3.30

SOURCES: Constructed by the author using information in Sistema de Información Hacendaria, SHCP, Salinas de Gortari (1992), and Urzúa (1991).

1/ It includes an extraordinary tax from 1985 on.
2/ It includes a tax on gross assets from 1989 on.
3/ It includes VAT from imports and VAT from PEMEX. During 1977-1979 it was a turnover tax instead of the VAT.
4/ It includes taxes on tobacco, liquor, beer, phone services, etc.
5/ It includes duties for the exploitation of natural resources, stamps, etc.
6/ Aprovechamientos in Spanish. Among other items, it includes income from selling assets.
7/ It includes fees, fines, lottery, etc.
8/ Contributions to IMSS and ISSSTE.
Note: Allow for rounding errors.
n.a. = not available.

In the early seventies, the ambitious tax reforms planned at the beginning of the Echeverría administration ended up, for reasons already explained, in simple measures such as the increase of the corporate income tax rates up to 42% and the 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 on preparing the stage for the introduction of a value added tax in 1980. The corporate income tax only received renewed attention after the crisis of 1982. Corporate taxes were partially reformed to take somewhat into account inflation distortions, and to try to incorporate sectors that until then had enjoyed an special treatment (e.g., the construction industry).

Nevertheless, as shown in Table 1, corporate income taxes continued to fall as a proportion of GDP. By 1987 the tax burden had fallen more than one percent of GDP compared to its peak in 1980. High inflation rates, together with widespread tax evasion, account for this phenomenon. For instance, firms were able to decrease tax payments through the deduction of interest payments that had a high inflationary component. The Olivera-Tanzi effect was also at work with monthly inflation rates exceeding 10%.

All those factors made the government, in mid-1986, to initiate a more comprehensive reform of the corporate income tax. The first change involved a shortening of the tax collection lags by requiring monthly payments. The next one was to lower the (for all purposes) flat corporate income tax rate to 35%. The last important change was to make adjustments to fully index the corporate income tax (firms were allowed to adopt this last change in a gradual fashion). This indexation scheme involved, in particular, "inflation-proof" depreciation of assets (Auerbach and Jorgenson, 1980).

In 1989 the new Salinas administration introduced a new tax on the firms' gross assets (the *impuesto al activo*) with the following features: First, it is a credit on the corporate income tax, so that it functions as a minimum corporate income tax. If it happens that the latter is less than the asset tax, the credit can be carried over to future years (up to three). 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, finally, the financial sector is totally exempted.

It should be noted that this tax on assets is far from being a novelty. As recounted by Sadka and Tanzi (1992), a variant of this tax seems to have already been used in Milan in the 17th century. Furthermore, the theoretical foundations of this kind of taxes were already laid down by Maurice Allais in the seventies. 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, instead of gross, worth the authorities let some firms to get away by disguising bad debt.

The tax on gross assets has proved to be effective in the case of Mexico. Yet, it is still an open question if it will endure the constant criticism made against it by the private sector. By early 1993, around 16,000 firms have looked for protection against the tax by invoking *amparo*, a legal scheme that can be invoked in case of possible abuses by the authority. Although the *amparo* was denied by the Supreme Court in April 1993, this behavior shows how unsatisfied is the private sector with the tax.

It should be finally noted that another goals actively pursued by the current administration are: the simplification of the tax declaration forms in the case of small firms; the enforcement of harsher penalties for tax evasion; and the adoption of tax rates that are "competitive" with the ones in the United States (with whom a tax treaty has been recently signed. Regarding tax competitiveness, it should be noted in passing that, counting the state and local taxes in the United States, the Mexican corporate income tax rates are already comparatively low.

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, during the Echeverría administration the top rate was increased to 42% in 1972, and three years later to 50%. It is also worth to point out that this reform also included, for the first time, rental income from housing as part of the income tax base.

During the tax reforms in 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. This explains the drop of the tax effort in this category shown in 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 of deductions 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 until 1988, as can be appreciated from Table 1. This happened though there was a surtax of 10% in

1983, and there were constant inflation-adjustments in the tax schedule. Widespread tax avoidance and tax evasion, together with a growing underground economy, seem to be the most important causes of the fall.

Knowing that, in the most recent years the Salinas administration has 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 tax authorities are firmly prosecuting for the first time tax evaders. A case in point: In April 1993 the government put in jail a famous singer that failed to report all her income in 1991; this act was surely orchestrated to send a message to the rest of the taxpayers, who had to fill their own personal income tax returns for 1992 just days later.

The authorities have also tried to widen the income base by incorporating economic activities that were not taxed before, by simplifying the tax regime in the case of small contributors, and by eliminating existing exemptions. With respect to this last point, the tax authorities have sent mixed signals. For instance, on the one hand, the government incorporated in 1993 authorship rights in the income tax base, in spite of a very loud opposition by all the Mexican writers, but, on the other hand, the profits realized by individuals in the stock market are still exempted!

A final point before concluding this review of the personal income tax: Altimir and Barbera (1991), in a comparative study for the Economic Commission for Latin America, have noted that the Mexican tax reforms implemented in the eighties tended to be quite progressive. Whether or not this is still the case, it is a question that will have to be answered by looking closely at the different income groups. For although there have been decreases in the top personal income tax rates and in the VAT basic rate in the last years, the income tax rates are not as progressive as before. To give an example, for an individual earning five monthly minimum wages the effective tax rates have doubled compared to 1982.

3.3. *The Value Added Tax*

The value added tax on consumption of domestic goods and imports was introduced in 1980. The VAT 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: it made obsolete over 25 federal taxes and 300 local excises. The VAT basic 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 along the northern border (to be competitive with US sales taxes).

Although the basic rate was too low to have a revenue-neutral tax reform, the government chose it to make the introduction of the VAT more palatable to the private sector. As mentioned earlier, from the mid-sixties on, there had been strong opposition to the introduction of a VAT, since the private sector argued that it was inflationary. Interestingly enough, Tait (1990) has reported that Mexico was one of the few countries in the world where the introduction of the VAT lead to a change in the inflation rate (not a shift in the price level).

After the crisis in 1982, the need for revenue made the new De la Madrid administration to increase the VAT basic rate to 15% in 1993. To 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 revenues in that year (see Table 1).

During the Salinas administration there have been two 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 also now applies to all luxuries and all transactions along the border. At the same time, the government increased the prices of oil and gasoline. As a consequence, VAT collection felt in 1992 around 21% in real terms compared to 1991; this drop represented around .86 points of GDP. The drop was around half the increase in revenue that was obtained from the already mentioned simultaneous increase in the price of hydrocarbons.

3.4. *Other Taxes*

Even since the stabilizing development period of 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 is, of course, 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, and except for an outlier in 1981, it is only in the last years that taxes on imports account for more than one percent of GDP (this later increase is due to a sharp deterioration in the balance of trade).

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 have 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). Furthermore, low public tariffs are also consequence of the perennial industrial policy that calls for subsidizing the domestic use of hydrocarbons and electricity.

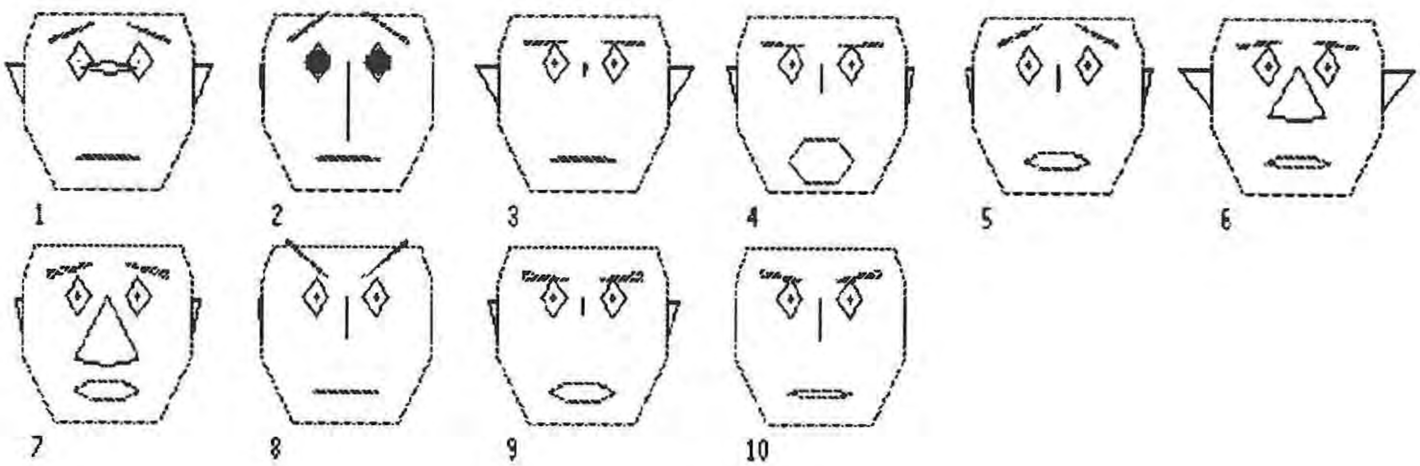
That behavior has brought, of course, some negative consequences: the oil monopoly PEMEX, already heavily taxed (see Table 1), has to depend on foreign oil sales to obtain operating profits. Likewise, the financial problems of the electric utilities and the train system are exacerbated by their low public 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. Many Mexican economists, and others (see, e.g., World Bank, 1992), have called for a sharp increase in gasoline prices as the only immediate way to curb down the ever increasing use of automobiles. However, the current administration, which seems mesmerized by the possibility of reaching a single-digit inflation rate, will not follow suit.

3.5. *An International Comparison of the Tax Burden*

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

FIGURE 2

TAX BURDEN FOR SELECTED COUNTRIES
(Proportion of GDP)



COUNTRIES (1989)

1. Argentina	6. Costa Rica
2. Botswana	7. Cote d'Ivoire (1986)
3. Brazil	8. India
4. Chile (1988)	9. Mexico
5. Colombia	10. Philippines

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

Source: Constructed by the author using consolidated central government data in IMF, *Government Finance Statitics Yearbook*, 1992.

uses, 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 income tax burden in the case of Botswana, coming from the taxation of mineral extracting firms; the large value added tax burden in the case of Chile, with a VAT rate larger than in Mexico and no exemptions; the disproportionate reliance on taxes on exports in the case of Argentina; and the large excise taxes in the case of India. The face corresponding to Mexico shows quite regular features, except for the low tax effort in the case of trade taxes.

4. OTHER FISCAL ISSUES

This section reviews, albeit very briefly, three fiscal issues that have recently gained importance in Mexico: The privatization of public enterprises, fiscal federalism (or the lack of it), and tax compliance.

4.1. *Privatization of Public Enterprises*

At the onset of the debt crisis in 1982, the Mexican federal government owned 1155 enterprises (see Table 2). By September 1992 this number had been decreased to 284, out of which 63 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 reasons: 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 was going to be put in a "contingency fund", the largest part of it has gone to retire domestic debt.

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*	284

SOURCE: Salinas de Gortari (1992).
NOTE: Table only includes enterprises at the federal level.
* Up to September.

Given the number of enterprises that were sold, it is a daunting task to examine in depth the privatization process in Mexico (a good start is made by Núñez Melgoza, 1993). As a general comment one can say that, with some sale exceptions (e.g., the sale of TELMEX) and some instances of "gift-seeking" to use the expression coined by Spraos (1992), the process of selling was accomplished quite well, and with a minimum of burocracy.

Whether the same good marks can be given to the privatization outcomes, it remains an open question. At this point one can only provide anecdotical references. For instance, while one 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 privatized phone company, TELMEX, continues to use its monopoly power to extract rents from the consumers.

4.2. *Fiscal Federalism?*

"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).

Article 115 in the Mexican Constitution was amended in 1983 to provide, in principle, more political and economic power to the municipalities. 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 are the federal participations, 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. It should be noted that the funds are not given directly to the municipalities, but rather to their states which then distribute them. It should also be noted that state governments are 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 in 1992 the federal government's National Solidarity Program, mentioned in Section 3 (and below), had more resources to spend that all the municipalities put together.

4.3. *Tax Compliance and the Accountability of the Government*

As noted in Section 3, during the Salinas administration, and contrasting with the mild stand taken by former administrations, the tax authorities have decided to make a frontal attack on tax evasion and tax avoidance. This is perhaps the most important fiscal advance made in the last years. Some of the mechanisms devised for that end have been already mentioned, but it is worth mentioning another one that could prove to be highly effective: Since 1992 the federal government is involved in a campaign to enforce the use by commercial firms of government approved cash registers (the *cajas registradoras de comprobación fiscal*).

Turning to the accountability of the government, it has been repeatedly said, specially by foreign economists and the foreign press, that another reason for the increase in tax collection in Mexico has been 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 of 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 following three: The first stated that any private person or organization should be able to audit any public office or enterprise. The third point stated that any public servant that steals money from the nation should receive a penalty three times harsher than the corresponding for the rest of the population. And, finally, the eight petition stated that any change in the tax law would have to be studied by the legislators at a rate of five days per page of the written changes in the law.

5. CHANGES IN THE COMPOSITION OF GOVERNMENT EXPENDITURES

We now turn to the other side of the balance sheet to examine government expenditures. For that purpose, Table 3 presents the most important spending items in the case of the federal government. During the eighties, the greatest spending shares corresponded to, first, the already mentioned interest payments on domestic debt. The importance of this item has been greatly reduced in the nineties for reasons also already given. The second greatest share corresponded to the so-called current transfers, which are just transfer 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 two social security institutions. Given the

TABLE 3

TOTAL EXPENDITURES OF THE FEDERAL GOVERNMENT, 1977-1991

(Percent of GDP)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
TOTAL EXPENDITURES	15.80	15.87	16.76	18.29	21.79	27.55	25.95	24.11	24.42	29.06	31.35	26.55	22.99	20.20	17.40
CURRENT EXPENDITURES	12.34	12.41	12.59	13.58	15.30	22.23	22.13	21.11	20.76	25.35	28.10	25.38	21.34	17.48	14.79
Wages and Salaries	4.11	3.98	3.90	3.55	3.67	4.07	3.24	3.39	3.27	3.14	3.27	2.85	3.05	2.74	3.13
Interest Payments	1.85	1.92	1.87	1.72	2.84	5.26	8.53	8.01	8.45	13.58	17.61	15.24	11.39	8.46	4.97
Domestic	1.12	1.09	1.15	1.23	2.29	4.14	6.36	6.15	6.57	10.93	14.53	12.65	8.86	6.75	3.15
External	0.73	0.83	0.72	0.50	0.55	1.12	2.17	1.86	1.88	2.65	3.09	2.59	2.53	1.71	1.81
Participations to States	1.44	1.51	1.61	2.28	2.50	2.23	2.79	2.86	2.69	2.58	2.66	2.86	2.85	3.05	3.14
Current Transfers	4.19	4.19	4.36	5.04	4.71	5.14	5.58	4.48	4.52	4.15	3.30	2.84	2.52	2.01	2.41
Others 1/	0.74	0.82	0.85	0.99	1.58	5.52	1.98	2.37	1.83	1.89	1.25	1.58	1.52	1.22	1.15
CAPITAL EXPENDITURES	3.93	3.94	4.28	4.53	6.22	4.85	3.81	3.23	3.78	3.55	3.22	1.93	1.97	2.69	2.28
Public Investment	1.32	1.23	1.23	1.52	1.46	1.48	0.78	0.85	0.91	1.00	0.90	0.53	0.51	0.85	1.06
Capital Transfers	0.76	0.62	0.91	2.28	3.93	2.52	2.28	1.83	2.27	1.92	2.18	1.27	1.29	1.68	1.08
Others 2/	1.85	2.09	2.14	0.73	0.82	0.86	0.75	0.55	0.60	0.63	0.13	0.14	0.16	0.16	0.14
ADJUSTMENT (-) 3/	0.47	0.48	0.10	-0.18	-0.27	-0.47	-0.02	0.22	0.13	-0.15	-0.03	0.76	0.32	-0.03	-0.33

SOURCES: Constructed by the author using information in Sistema de Información Hacendaria, SHCP.

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 the accounts of other public entities.
Note: Allow for rounding errors.

privatizations in the eighties, this item has also lost importance in the last years, as shown in the table. Finally, the third largest spending share corresponded, and still corresponds, to wages and salaries paid to the bureaucrats in the federal government. This last item is also the most important one at the level of states and municipalities.

5.1. *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 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 felt drastically as the stabilization adjustments, mentioned in Section 2, took place. 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.

5.2. *The National Solidarity Program*

According to the latest Income and Expenditure Survey, 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, that is a one percent gain per year!

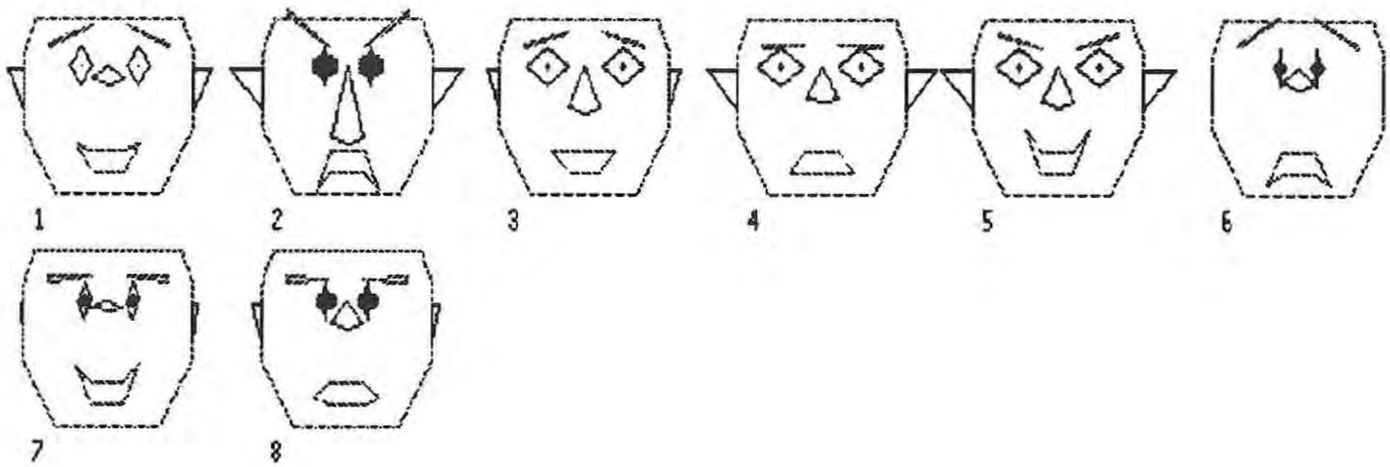
The *Programa Nacional de Solidaridad* (*PRONASOL*), the National Solidarity Program, was created by President Salinas with the main objective of attacking extreme poverty. One of the novel features of this social program is that it takes great pains, at least on paper, on identifying the neediest, and on making the recipients active participants in the social projects. Regarding this last aspect, some critics have argued that *PRONASOL* is, at the end, just a clever program to attract more voters to the dominating party. However, it seems too early to provide a balanced evaluation of the results of this program.

5.3. *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 eight 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 Mexican face features in Figure 3 are not as regular as one would like them to be.

FIGURE 3

EXPENDITURE BY FUNCTION FOR SELECTED COUNTRIES
(Proportion of GDP)



COUNTRIES (1989)

1. Argentina
2. Botswana
3. Brazil
4. Chile (1988)
5. Costa Rica
6. India
7. Mexico
8. Philippines

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, *Government Finance Statitics Yearbook*, 1992.

REFERENCES

Altimir, O. and M. Barbera (1991), "Tributación y Equidad en América Latina. Un Ejercicio de Evaluación Cuantitativa," manuscript, CEPAL, Santiago de Chile.

Auerbach, A. J. and D. W. Jorgenson (1980), "Inflation-Proof Depreciation of Assets," *Harvard Business Review*, Vol. 58, pp. 113-118.

Banco de México (1993), *Indicadores Económicos*, Banco de México, México.

Bird, R. M. (1992), "Tax Reform in Latin America: A Review of some Recent Experiences," *Latin American Research Review*, Vol. 27, pp. 7-36.

Chernoff, H. (1973), "Using Faces to Represent Points in K-Dimensional Space Graphically," *Journal of the American Statistical Association*, Vol. 82, pp. 424-436.

Gershberg, A. I. (1990), "Decentralization and Public Finance in Mexico," manuscript, Regional Science Department, University of Pennsylvania.

Gil Díaz, F. (1987), "Some Lessons from Mexico's Tax Reform," in D. Newbery and N. Stern, eds., *The Theory of Taxation for Developing Countries*, Oxford University Press, New York.

Gil Díaz, F. (1990), "Tax Reform Issues in Mexico," in M. J. Boskin and C. E. McLure, eds., *World Tax Reform: Case Studies of Developed and Developing Countries*, ICS Press, San Francisco, California.

International Monetary Fund (1992), *Government Finance Statistics Yearbook*, International Monetary Fund, Washington.

Núñez Melgoza, F. J. (1993), "Privatización y Desempeño de la Empresa Pública: Aspectos Conceptuales y el Caso de México," manuscript, El Colegio de México.

Sadka, E., and V. Tanzi (1992), "A Tax on Gross Assets of Enterprises as a Form of Presumptive Taxation," IMF Working Paper WP/92/16, IMF, Washington.

Salinas de Gortari, C. (1992), *Cuarto Informe de Gobierno*, Presidencia de la República, México.

Solís, L. (1981), *Economic Policy Reform in Mexico: A Case Study for Developing Countries*, Pergamon Press, New York.

Spraos, J. (1992), "A Thematic Tour of Privatization, with European Illustrations," in A. A. Zini Jr., ed., *The Market and the State in Economic Development in the 1990's*, North-Holland, Amsterdam.

Tait, A. A. (1990), "VAT Revenue, Inflation, and the Foreign Trade Balance," in M. Gillis, C. S. Shoup, and G. P. Sicat, eds., *Value Added Taxation in Developing Countries*, World Bank, Washington.

Urzúa, C. M. (1991), *El Déficit del Sector Público y la Política Fiscal en México, 1980-1989*, CEPAL/PNUD, United Nations, Santiago de Chile.

World Bank (1992), *World Development Report*, World Bank, Washington.

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