Social Security Reform in Mexico: For Whom?

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PRELIMINARY: PLEASE DO NOT QUOTE

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I. Introduction

Social security is meant to be the centerpiece of Mexico’s social policy, providing workers with access to health insurance, housing loans, day care centers for children as well as retirement, disability and work-risk pensions. But because it is mostly financed by wage-based contributions that are not fully valued by beneficiary workers it partly acts as a “pure” tax on salaried employment, which in Mexico is the only form of employment covered by social security. Firms and workers avoid this tax legally by shifting to activities that involve non-salaried contractual relations and to self-employment; and illegally through large scale evasion of social security laws.1 This distorts the allocation of aggregate labor by inducing over-employment in the informal sector and increasing labor costs in the formal sector. As a result, social security has negative economy-wide effects on productivity, competitiveness and, potentially, growth.

Over the last decade legal reforms have sought to improve the functioning of social security bringing benefits closer to costs. Two are discussed here. The first, in 1995, centered on a change from a defined-benefit pay-as-you-go retirement pension system to a defined-contribution pre-funded scheme, with individual accounts administered by private financial firms known as Administradoras de Fondos para el Retiro, Afores. The second, in 2004, centered on reducing the costs of the special pension regime of IMSS own workers so that social security contributions are principally channeled to provide services to affiliated workers, and not diverted to fund this special pension regime.

This paper uses these two reforms to study the link between productivity and competitiveness, on one hand, and income or power concentration, on the other. The core hypothesis is that rent-seeking by groups associated with the provision of social security services --in particular, the Afores in the administration of individual retirement accounts and the IMSS union in the case of services directly provided by IMSS-- widens the “pure” tax component of social security contributions. This reduces GDP by augmenting lower productivity informal employment. A subsidiary hypothesis is that when the absence of social security for workers in the informal sector is remedied through various social programs financed out of general revenues, the implicit

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1 Thus the total labor force is divided into a “formal” sector with social security coverage, and an “informal” sector lacking such coverage, with the latter made up of a legal segment (those in self and non-salaried employment) and an illegal segment (those salaried employed with firms evading social security),
“subsidy” to informal employment magnifies the efficiency losses derived from the “pure” tax on formal employment, further lowering GDP and aggregate labor productivity.

Measures to reduce rents of the Afores and the IMSS worker’s union would enhance economy-wide efficiency by reducing the tax on formal employment, and the need for social programs that subsidize informal employment. These measures would also increase equity as a larger share of social security contributions translate into benefits for workers. In addition, the implicit tax on formal firm’s profits would fall, inducing more investment in the higher productivity formal sector of the economy. A narrower wedge between the costs and the value of social security would also reduce incentives to evade social security. Lastly, fewer fiscal resources would need to be devoted to social protection programs, in principle allowing their use for growth-promoting public investments.

Measures have been taken to induce more competition between Afores, but the transition to a reasonably low-cost system has been very slow and needs to be accelerated. Equally, though a legal reform was approved to insure that social security contributions are no longer channeled to subsidize the special pension regime of new entrants to IMSS, it has so far been by-passed. The partial ineffectiveness of these measures generates large and growing fiscal costs because: (i) tax collections are more difficult in the ever growing informal sector –characterized by hundreds of thousands of small or micro-firms; (ii) fewer workers accumulate sufficient resources in their individual account to reach a minimum pension;2 and (iii) paying for the special pension regime of IMSS workers may require fiscal subsidies as IMSS is unable to do this and at the same time provide health services to affiliated members.

Three elements reduce the political pressures for reform. First, social protection programs for informal workers and large scale evasion of social security by firms. In the absence of substantive barriers to labor mobility, workers arbitrage between the formal and the informal sector. Thus, from workers point of view, particularly low income workers, the formal-informal divide becomes increasingly meaningless, and large mobility between sectors is observed. And from the point of view of firms the combination of evasion and free social protection programs for their workers is a mechanism to shift social security contributions from their accounts to the government’s accounts.

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2 According to the Social Security Law workers enrolled in social security for more than 1,250 weeks (approximately 25 years) are entitled to a retirement pension of one minimum wage regardless of the amount accumulated in their individual account; this guarantee is provided by the federal government.
This situation may persist as long as the overall system of social benefits (social security and social protection) receives “external funding”. Labor productivity might stagnate, but workers’ living standards can increase gradually.

The second element derives from the fact that no individual group’s income is explicitly taxed to pay for the status quo. At the margin, the “external funding” required for social programs comes from a combination of reduced public investment and increased oil rents. The third element might come from the government itself: social protection programs can in the short run increase its popularity without the need to face financial and trade-union interests to improve social security; equity, competitiveness and fiscal vulnerability notwithstanding.

A large over-haul of social security and social protection programs is needed to move away from the current low productivity-high inequality equilibrium. This involves issues beyond the quality of health services at IMSS and commissions by Afores, and includes a discussion of the desired vs. the actual level of bundling of social security benefits; the linking of social security coverage to salaried labor only vs. all forms of labor; and, inevitably, the source of funds to pay for social benefits to substitute for wage-based social security contributions. This is a tall order.

Nonetheless, partial reforms can be carried out while this occurs, or may indeed be pre-requisites for this to occur. Lowering rents captured by the Afores and ceasing the by-pass of the 2004 reform would be steps in the direction of equity and productivity, in a transition path towards a broader reform of social policy to make it both more equitable and more efficient; although both measures are insufficient for this purpose. The chances of these partial reforms can be enhanced by more transparency, access to easily understandable information, and stronger accountability. Chances would also be enhanced if Congress had stronger incentives to induce social security agencies to further pursue reforms and fully comply with the law; instead of over-looking these problems while annually approving the use of increasing resources for social protection programs. A key point is the need for measures to make Congress and the Executive internalize the opportunity costs of oil rents. More generally, measures are needed to enhance the role of Hirschman’s “Voice” and reduce the role of “Exit” in workers’ and firms’ reactions to the rent-extraction behavior of these two interest groups.

The reminder of this paper is organized as follows. Section II provides background discussion on Mexico’s social security system. Section III sketches
a simple framework to identify the equity and efficiency effects of social security. Section IV describes the 1995 reform and analyses the effects on Afores’ profits and real rates of return on workers’ savings. Section V describes the 2004 reform and its actual implementation in 2005. Section VI links the results of section III with those of sections IV and V. The role played by social protection programs is discussed in section VII. Section VIII closes with some partial suggestions to remedy the current situation.

II. Background on Social Security in Mexico

Three features of Mexico’s social security system deserve attention for the purposes of this paper. First, article 123 of Mexico’s Constitution separates workers into those employed in the private sector (in what is called segment “A”) and those employed in the public sector (segment “B”). Workers in segments “A” and “B” have different social security regimes and are ruled by different labor laws.\(^3\) In what follows I focus only in the social security system of workers belonging to segment “A”, and the institutions associated with it.

Second, the Social Security and Federal Labor Laws establish that social security is a right of salaried workers only, and an obligation of firms only with respect to the salaried workers that they hire. Other members of the labor force like the self-employed, domestic workers, and workers involved in a non-salaried relation with a firm may voluntarily join social security, but are not obliged to do so.\(^4\)

The third feature is that coverage of social security involves a wider set of benefits than in many other countries. In fact, a worker with social security is entitled to: (i) health insurance, (ii) day-care services for children; (iii) life

\(^3\) Workers in segment “A” are ruled by the Ley Federal del Trabajo and the Ley del Seguro Social (henceforth Federal Labor Law and Social Security Law), while workers in segment “B” by the Ley de los Trabajadores al Servicio del Estado and the Ley del Instituto de Seguridad Social y Servicios para los Trabajadores del Estado (henceforth, ISSSTE Law).

\(^4\) See articles 12 and 13 of the Social Security Law. This law also obligates partners in a cooperative society to affiliate to social security, but this is a small group and I do not discuss them any further. The key distinction is between salaried and non-salaried workers, where the former are defined as those workers performing subordinated work for a boss in exchange for a wage (establishing the legal figure of a relación obrero-patronal). This is stated as well in article 20 of the Federal Labor Law. The words “subordinated” and “wage” matter greatly here, as they leave open whether workers engaged with a firm under risk-sharing or effort-eliciting contracts receiving a commission or profit-sharing are subordinated or not, and are receiving a wage or not. If, as is the standard interpretation in Mexico, they are not, then firms hiring workers with non-wage contracts are not obligated to affiliate their workers to the social security system.
insurance; (iv) disability pensions; (v) work-risk pensions; (vi) sports and cultural facilities; (vii) retirement pensions; and (viii) housing loans.

The first six of these benefits are under the mandate of the Instituto Mexicano del Seguro Social, IMSS.\(^5\) Retirement pensions are in the form of a defined contribution individual accounts system administered by private Afores regulated by the Comisión Nacional del Sistema del Ahorro para el Retiro, CONSAR. Finally, housing loans are administered by the Instituto del Fondo Nacional para la Vivienda de los Trabajadores, INFONAVIT. These three agencies form the core of Mexico’s social security institutions for workers in segment “A”. All three agencies have a similar corporate structure, with a Board of Directors made up of government officials designated by the President (including the Director General of each agency), and representatives of workers and firms’ organizations. This tripartite board composition in turn reflects the tripartite source of the funds collected to finance social security, as well as the political conceptualization of social security as a shared responsibility between workers, firms and the government.

Despite legal similarities in purpose and structure, there are some critical differences between IMSS, CONSAR and INFONAVIT. Perhaps the most important is that the first, aside from acting as a social insurance agency, is by-and-large the main provider of the services under its mandate, particularly in health.\(^6\) The latter two, on the other hand, serve a regulatory or financial role; but INFONAVIT is not a builder of housing, nor is CONSAR an operator of Afores. IMSS, on the other hand, directly operates health services for all of its affiliate workers and their families, making it a very large medical organization; in fact, the largest single provider of medical services in Mexico and probably among the largest in the world.\(^7\) As a result, IMSS has a labor force of over 370,000 employees making it the largest single employer in Mexico. Personnel

\(^{5}\)Permanent work and disability pensions are in the form of annuities sold by private insurance companies. But the administration of funds prior to the purchase of an annuity and the critical step of assessing the right to a permanent work-risk or disability pension is carried out by IMSS.

\(^{6}\)The Social Security Law does not give IMSS a monopoly in the provision of services, including health. But since the start of IMSS, in 1943, this has been de facto the case. Some health services are out-sourced, but this is the exception rather than the rule. Further, IMSS is fully free to determine its mix of in-house and out-sourced services, with no regulations regarding cost-comparisons or quality of services. Workers affiliated with IMSS have no say in this regard, so the behavior of IMSS is very much that of a monopolist.

\(^{7}\)IMSS is also the second-largest collector of public revenues, after the Ministry of Finance. IMSS collects all social security contributions, and then transfers funds to INFONAVIT for the housing component of social security, and to the Afores for the retirement pensions component. For this reason, coverage or affiliation with IMSS is equal to coverage of INFONAVIT and affiliation with an Afore.
performing services for INFONAVIT and CONSAR, by contrast, are not relevant from this perspective. In turn, IMSS workers are organized in the Sindicato Nacional de Trabajadores del Seguro Social, SNTSS, the second-largest union in Mexico measured by the number of affiliates.  

The previous description implies that the coverage of social security follows the distribution of the labor force between public and private workers, and among the latter between salaried and non-salaried workers. If we associate coverage of social security with the status of “formality” and lack of coverage with “informality”, then the labor force divides into a formal and an informal sector, with formal sector workers receiving social security coverage (segment “A” with IMSS and “B” with ISSSTE), and informal sector workers without. In principle, this division of the labor force should coincide with salaried and non-salaried workers. But this is not the case because as a result of large-scale evasion of social security in segment “A”, there are salaried workers without social security that add to the size of informal employment. Table 1 describes the relative magnitudes of each as of December 2005.

**Table 1**  
**Mexico’s Labor Force and Social Security Coverage, 2005**  
(Thousands of workers)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Formal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. ISSSTE (“B”)</td>
<td>3,327</td>
<td>7.6</td>
</tr>
<tr>
<td>2. IMSS (“A”)</td>
<td>13,831</td>
<td>31.5</td>
</tr>
<tr>
<td>2a) &gt; 3mw</td>
<td>6,007</td>
<td>13.7</td>
</tr>
<tr>
<td>2b) ≤ 3mw</td>
<td>7,824</td>
<td>17.8</td>
</tr>
<tr>
<td><strong>II. Informal</strong></td>
<td>26,707</td>
<td>60.9</td>
</tr>
<tr>
<td>3. non-salaried &gt; 3mw</td>
<td>2,860</td>
<td>6.5</td>
</tr>
<tr>
<td>4. non-salaried ≤ 3mw</td>
<td>16,147</td>
<td>36.8</td>
</tr>
<tr>
<td>5. salaried (evasion)</td>
<td>7,699</td>
<td>17.6</td>
</tr>
<tr>
<td><strong>III. Total</strong></td>
<td>43,866</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Levy (2006b). Notes: ISSSTE includes also state level social security institutions; mw=minimum wage.

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8 The largest union in Mexico is that of public teachers of which there are approximately one million who, however, belong to segment “B”, and whose direct contractual relation is with state governments.

9 In segment “B” there is hardly any evasion, as hiring is carried out by federal or state level ministries and agencies that do not operate under a profit-maximizing logic as opposed to private firms in segment “A”.
Four points are relevant: first, social security covers less than 40% of the total labor force. Second, excluding segment “B”, the labor force in 2005 consisted of 40.5 million workers, of which only 13.8 million had social security (or 34%); a telling situation more than sixty years after the creation of social security in Mexico! Third, more than half of formal workers had earnings of three or less minimum wages a month. This observation cannot be made for informal workers as information is lacking on the earnings of informal (illegal) salaried workers; but considering only non-salaried informal workers the proportion earning less than three minimum wages was 85%. All in all, there were at least 24 million workers, more than half of the labor force, with low wages. Finally, fourth, note that evasion of social security is rampant, equivalent to 36% of salaried workers in segment “A”.

I close this section with a short discussion of a central characteristic of Mexico’s labor market that is relevant for the discussion that follows: there is large scale mobility of workers between the formal and the informal sector, and this mobility is greater at lower wage levels. Table 2 summarizes the results of an exercise where the length of stay in the formal sector --measured by affiliation with IMSS-- of nine million individual workers was followed from July 1997 to July 2005.

Interestingly, only 11.6% of low wage workers have been enrolled with IMSS for nine complete years over the nine-year period, as opposed to 42.4% of high wage workers. At the other end, of all low wage workers who were enrolled in IMSS in 1997, almost 18% were in the formal sector for one year over the last nine; this contrasts with 7.6% of high wage workers. All in all, the average low wage worker who in 1997 was enrolled in IMSS has had social security coverage for only 4.3 out of the nine years during which he could have been covered, or 48% of his working time; the corresponding average for high wage workers is 6.5 years, or 72% of his working time.\(^\text{11}\)

\(^{10}\) A minimum wage is equivalent to 1,400 pesos a month (approximately US$ 130). Three minimum wages is taken here as the cut-off point between workers with “high” and “low” wages respectively.

\(^{11}\) This exercise divides workers into “high” and “low” wages. There is, of course, a continuum. Workers earning, say, 5 minimum wages or more have longer stays in formality than 72% of their time and workers earning, say, 2 minimum wages or less have shorter stays than 48% of the time. There is a complex set of reasons behind this phenomenon, derived not only from social security regulations, but also from labor regulations over hiring, firing and severance payments. The phenomenon matters greatly for how workers value social security, and its impact on efficiency and equity as discussed in the next section.
Table 2
Years of Affiliation with Social Security, 1997-2005

<table>
<thead>
<tr>
<th>Share of workers who have been in the formal sector for x years</th>
<th>With 3 or more minimum wages</th>
<th>With 3 or less minimum wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>7.6</td>
<td>17.8</td>
</tr>
<tr>
<td>Two</td>
<td>7.0</td>
<td>15.2</td>
</tr>
<tr>
<td>Three</td>
<td>6.0</td>
<td>12.9</td>
</tr>
<tr>
<td>Four</td>
<td>6.5</td>
<td>11.4</td>
</tr>
<tr>
<td>Five</td>
<td>6.8</td>
<td>9.3</td>
</tr>
<tr>
<td>Six</td>
<td>6.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Seven</td>
<td>7.4</td>
<td>7.2</td>
</tr>
<tr>
<td>Eight</td>
<td>9.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Nine</td>
<td>42.4</td>
<td>11.6</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Levy (2006b). Notes: The exercise begins in July 1, 1997 when the current Social Security Law came into effect. There were almost 9 million workers affiliated with IMSS in July 1997, of which 3 million earned 3 or more minimum wages and 6 million three or less. The table records the number of years in formality, given that the worker was enrolled in IMSS in 1997. Workers with 56 years of age or more in 1997 were excluded from the data base, so that departures from formality are not due to retirement; as a result, when the worker is not in the formal sector, he is either in the informal sector, openly unemployed, has dropped out of the labor force altogether, or has migrated abroad.

More generally, workers in Mexico have spells of formality with social security coverage, and spells of informality without such coverage; these transits are more frequent the lower is the worker’s wage.12 There appear to be no substantive barriers for workers to enter the formal sector and have access to social security coverage.13 Workers can access social security, even poor workers from Progresa families. The formal-informal dichotomy is a characterization of the legal status of workers at a point of time, but not a permanent separation of individual workers into two mutually exclusive subsets. The dichotomy, further, is less useful the lower is the wage of the worker. For low wage workers the problem does not appear to be accessing a formal

12 These results are confirmed using a different data base, the Encuesta Nacional de Empleo Urbano, which is also a panel data set that allows following workers’ formal-informal transits (although for only a year). According to this data set, in 2005 16% of low wage workers who began the year in the formal sector ended it in the informal; and 10% of low wage workers who started the year in the informal sector ended it in the formal (Levy (2006a)). Calderon-Madrid (2006) also computes transition matrices for Mexico between formality and informality for 1997, 2001 and 2005 and finds similar results. See also Gong et al. (2004), Bosch and Maloney (2006) and Kaplan, et al. (2005). On the other hand, transits from formality and informality into open unemployment are very small, and spells of open unemployment are very short; see the evidence gathered in IDB (2004). Note that there is no unemployment insurance in Mexico.

13 The evidence also suggests that the minimum wage is not binding in any relevant sense; see Maloney and Nunez (2004) and Bell (1997).
sector job with social security; the problems is that for a variety of reasons there is very erratic permanence of these workers in social security.

Transits between formality and informality raise fundamental questions for Mexico’s social security system. Consider, for instance, the implications of such transits for retirement pensions. If the patterns of mobility observed over the 1997-2005 period continue in the future, the average low wage worker will have to work fifty years to qualify for a minimum pension. This worker will only be forced to save for retirement during the formal half of his working life. During the other informal half of his working life he might save for retirement, and he might do so in his Afore where he is forced to save during his formal half; but then again he might not, or do so in an instrument other than his Afore. Similar observations apply to health or work risk coverage. If the low wage worker is ill during his formal half he will access IMSS health services, but not if this occurs during his informal half. The same is true of a work accident: depending on when this occurs, he might or might not have a work-risk pension, or access to rehabilitation services. Similar considerations apply if he is to get a loan for housing through INFONAVIT.

It is not the purpose of this paper to pursue these issues. But they are nonetheless relevant for three reasons: one, because it signals that the social security system, the combination of IMSS-INFONAVIT-CONSAR, is not working according to design, particularly for low income workers. Two, because as I will argue below, under these circumstances there are important efficiency losses for the whole economy, as the so-to-speak malfunctioning of social security lowers the productivity of labor and the competitiveness of firms. And three, because there are important equity implications, as the costs of the malfunctioning system are not absorbed by firms and workers in the formal sector only --who in principle are the beneficiaries of the system--, but spread out to all workers, formal and informal.

III. Equity and Efficiency Effects of Social Security

This section briefly describes a framework to identify the equity and efficiency effects of social security. The simplest case occurs when the total labor force $L$ is divided into salaried and non-salaried employment, with and

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14 This section borrows from Levy (2006a), where a more detailed discussion is presented including extensions to cases where firms and workers evade social security laws and situations where workers have different preferences for social security benefits. None of this is necessary for what follows, however.
without social security coverage, respectively (or into formal and informal employment). Focusing in 2005 and following table 1, L consists of approximately 40.5 million workers (excluding segment “B”), 13.8 million formal and 26.7 informal. In parallel, firms are divided between formal and informal, respectively hiring salaried and non-salaried workers.15

Let $T_f$ be the monetary costs of social security benefits and $w_f$ the formal sector wage so formal firms’ cost of hiring one worker with social security coverage is given by $(w_f + T_f)$.16 Table 3 shows the components of $T_f$ for a worker earning two minimum wages (in pesos of 2006). Each month the worker gets 2,788 pesos, while the firm has to pay for the worker 3,611 pesos. The worker is then in principle entitled to receive health and day care services from IMSS, is covered by a disability or work-risk pension; at the same time 175 pesos are deposited in his Afore account for his retirement and 139 pesos in his account for an INFONAVIT housing loan.17 Note that for this worker social security contributions are approximately 30% of his wage.

Table 3
Wages and Social Security Costs, 2006
(pesos)

<table>
<thead>
<tr>
<th>Monthly wage ($w_f$)</th>
<th>2,788.80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of $T_f$</td>
<td>822.18</td>
</tr>
<tr>
<td>1. Health insurance</td>
<td>341.10</td>
</tr>
<tr>
<td>2. Work-risk pension</td>
<td>72.48</td>
</tr>
<tr>
<td>3. Disability pension and life insurance</td>
<td>66.24</td>
</tr>
<tr>
<td>4. Retirement pension</td>
<td>175.03</td>
</tr>
<tr>
<td>5. Day care and sports and cultural services</td>
<td>27.89</td>
</tr>
<tr>
<td>6. Housing</td>
<td>139.44</td>
</tr>
<tr>
<td><strong>Total labor cost</strong> = ($w_f + T_f$)</td>
<td>3,610.98</td>
</tr>
</tbody>
</table>

Source: own calculations based on current legislation.

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15 Informal employment also includes the self-employed, not necessarily associated with a firm. But the decisions of workers concerning self-employment or employment in association with a firm also depend on the structure of wages and benefits in salaried or non-salaried employment.

16 $T_f$ is usually expressed as a fraction of the wage, but is easier to express it in absolute terms.

17 The mechanics associated with the 139 pesos are complex. The funds are deposited in a sub-account of the worker’s Afore account, although these resources are not managed by the Afore, but by the INFONAVIT. Against the balance of the housing sub-account the worker may, fulfilling some criteria, request a housing credit. If he does not get one before retirement, the funds accumulated in his housing sub-account are added to the funds in the retirement account and used to purchase an annuity for retirement income, so that ex-post the worker ended-up being forced to save not 175 pesos a month, but 314 (=175+139). In general lower wage workers have less access to a housing loan (because of the lower wage and higher mobility), so that they end up saving for retirement a larger proportion of their wage than workers with higher wages.
It is important to note that all benefits are grouped or bundled together. A worker cannot choose to forego some a particular benefit (say, the housing fund or savings for retirement or day-care services) as a result of his individual preferences or circumstances; the Law obliges him to all. Similarly, a formal firm employing a salaried worker must also pay for all components of social security. It is, so-to-speak, and “all or nothing” package.

Formal firms have a demand for labor $D_f$, and hire workers up until the point where their marginal product, $MPL_f$, equals their cost to the firm, $(w_f + T_f)$. In the example above, firms will hire workers up to the point where their monthly productivity is 3,610 pesos (not 2,788 pesos). Critically, note that social security implies that the productivity of the worker must be 30% higher than his wage if he is to be hired by a formal firm.

For various reasons, however, formal sector workers might not attach a value to these social security benefits equivalent to their costs, i.e., formal workers might not consider that the 822 pesos that they are getting in benefits are worth to them 822 pesos. Among the many reasons that could produce this result, think of the case of a worker living in a medium or small urban area of Mexico where IMSS has few medical facilities (in some cases none!). The worker expects that for his 341 pesos a month he and his family will receive medical care. But if facilities are of very low quality, there are long lines, the equipment is old, some medicines are not available, or simply facilities are not there, his judgment might change. Various reasons can account for low quality services, but certainly one of them is that out of his 341 pesos for medical services IMSS uses 55 pesos to pay for the special pension regime of its own workers, and only 286 pesos for salaries of doctors and nurses, medicines and equipment. Or consider a jornalero agrícola that is only in salaried employment during six months out of the year, so that he would need to be employed for fifty years to get a minimum pension for retirement. Or think what is the value of an Afore account for any of the approximately 300,000 workers who annually migrate abroad. Many of these workers might prefer their 175 pesos in cash today, perhaps to pay for migration costs, than a retirement pension in a distant future that they may never enjoy because they may not retire in Mexico. Yet another case might be that of a married worker

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18 This would be more so if, at the same time, where he lives there are other medical facilities that maybe are of equally low quality, but that are free, or at least are there; see section VII.

19 The share of total IMSS revenues channeled to the special pension regime of IMSS workers in 2005 was 16%. This will double in the next decade; see IMSS (2005). IMSS revenues exclude the resources channeled to INFONAVIT and the Afores.
whose husband or wife is already covered by social security, for whom the marginal benefit of the 341 pesos of health coverage is zero (as the wife’s or husband’s health insurance already covers him/her). Or, finally, the case of a worker that has opportunities for saving in a financial instrument or a productive project with real rates of return of 5%.

This is in contrast to the average annual rate of return that he has received in his Afore over the last nine years, net of Afore charges, that has been in the order of less than one%. Let \( \beta_f \in [0,1] \) be the valuation coefficient that workers attach to social security benefits, so that their utility from a formal sector job is \( (w_f + \beta_f T_f) \). Clearly, if workers value social security fully, so that \( \beta_f = 1 \), formal firms labor costs will equal formal workers earnings (or utility); conversely, if workers do not fully value the benefits of social security, so that \( \beta_f < 1 \), there will be a wedge between what the formal firm pays and what the worker receives. This wedge is equal to \( (1 - \beta_f)T_f \) and it is exactly equivalent to a tax on formal employment (not on labor).

The informal sector of the economy is simpler: there are firms with a demand for labor \( D_i \) hiring \( L_i \) workers, with the important difference that there are no social security costs, so that if \( w_i \) is the wage in the informal sector, these firms will hire workers up until the point in which the MPL of a worker does not need to be 30% higher than his wage for him to be hired. Of course, workers in the informal sector know that they will only receive \( w_i \) as their pay, without any access to social security: no IMSS health coverage, no Afore, and no possibility of an INFONAVIT housing loan. Whether this matter much or little to them depends on what these benefits really mean to them (and what alternatives they have, as elaborated on in section VII).

Graph 1 provides a simple representation of the equilibrium distribution of the labor force \( L \) between formal employment \( L_f \) and informal employment \( L_i \), with the demand for labor \( D_f \) drawn from the left hand side of the diagram, and the demand for informal labor \( D_i \) drawn from the right hand side, in the

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20 Gertler, et al. (2005) find that many workers from Progresa-Oportunidades families are credit or liquidity constrained, but that when they have access to credit they have investment opportunities with real rates of return of about 5%. The opportunity cost of saving for retirement in an Afore for these workers is then too high. (Progresa-Oportunidades is Mexico’s conditional cash transfer program for poor families.)

21 The next section presents evidence on rates of return in the Afores. Note that the examples above were centered on health and retirement pensions, as these are the two situations addressed in the next two sections. However, similar considerations could be offered for day-care services, housing, and so on.
standard two-sector general equilibrium set-up. Consider first the case where social security is fully valued, so that $\beta_f = 1$. In this case the equilibrium would be at point A, with $L_f^*$ workers employed in the formal sector with social security coverage, and $L_i^*$ (not drawn, but equal to $(L - L_f^*)$) workers employed in the informal sector without social security coverage.

**Graph 1**  
Social Security with a Formal and an Informal Sector

Workers in the informal sector receive a wage of $w_i^*$, while workers in the formal sector get $w_f^*$. However, when the value of the social security benefits received by formal workers is considered, total earnings of workers in one sector equal total earnings in the other.

Although simple, this graph carries three important messages. First, note that the MPL in the formal sector, $(w_f^* + T_f)$, is equal to the MPL in the informal, $w_i^*$, so that the allocation of labor in the economy is efficient. This has a simple interpretation: there is no possibility of increasing the country’s GDP re-allocating workers from one sector to the other. So the first message is that a well functioning social security system, interpreted here as a $\beta_f$ of unity (or very close to unity) allows to maximize the productivity of labor in the
economic. And, of course, the higher is labor productivity, the higher are workers’ wages.

Second, note that social security contributions are fully paid by formal workers.\textsuperscript{22} This is very important. The Social Security Law might state, as it does, that workers and firms both contribute to social security. But this is just a legal formality. In the labor market there is an adjustment process in response to this Law, and this process involves a reduction of wages in the formal sector (so the firm saves in wages what it pays in social security contributions). Differently put, social security only changed the composition of formal workers consumption: before social security they could freely dispose of their wage $w_i^*$ in whatever bundle of goods they choose. With social security they can only dispose freely of their wage $w_f^*$. In addition, however, these workers now get health insurance provided by IMSS, are saving part of their income in an Afore, and so on, all with a cost of $T_f$. But since the worker values his health insurance with IMSS and his individual savings account with his Afore and his other benefits at exactly $T_f$, the sum of his freely disposed wage $w_i^*$ and his social security benefits valued at $T_f$ are the same to him as working in the informal sector and earning a higher wage of $w_i^*$ but with no social security benefits. So the second message is that a well functioning social security system is not redistributive in the sense of lowering formal firms’ profits to increase formal sector workers wages, but it does give these workers access to a bundle of goods that is very important for their welfare (at least from the government’s point of view).

The third message is that when social security works well, there is no change in the informal sector. Informal employment is the same with or without social security, as is the level of output of informal firms. Evidently, informality in the sense of lack of social security coverage is inevitable in a legal framework that excludes non-salaried labor relations from the obligations of social security. And in any economy there are many valid reasons for non-salaried employment relations: because firms and workers find it profitable to engage in such relations for risk-sharing or effort-eliciting reasons; and because many workers might also find it profitable to work on their own.\textsuperscript{23} Informality

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{22} To see this, consider what happens if there was no social security. Formal firms’ labor costs would be only $w_i$, while informal firms’ labor costs would be $w_e$. Given mobility in the labor market, the equilibrium wage in the formal and the informal sector would be the same (in fact, the distinction between both sectors would not be very meaningful). This wage could only be $w_i^*$, where all workers are employed. When there is social security and it is fully valued, the wage in the formal sector falls to $w_f^*$, although when added to the value of benefits $T_f$ it equals $w_i^*$.
\item\textsuperscript{23} Because they have entrepreneurial abilities or because they own some productive assets (like land).
\end{itemize}
\end{footnotesize}
in this context is as efficient as formality, except that informal workers consume a different bundle of goods than formal workers, as a result of the existing legal framework.

These three messages change importantly when social security is not fully valued. To see this, note that when \( \beta_f < 1 \) then \( (w_f + \beta_f T_f) < w_i \), so workers in the formal sector are less well-off than in the informal. This induces some workers to move out of the formal sector, as can be followed in graph 1, with formal sector employment falling from \( L_f \) to \( L_i' \) (and therefore informal employment increasing). But with fewer workers in the formal sector the formal wage inevitably increases, from \( w_f \) to \( w_i' \). A key point here, however, is that formal firms still have to incorporate into their labor costs the full amount of social security contributions, \( T_f \), regardless of whether workers value them fully or not; inevitably, their labor costs increase. This induces formal firms to move from point A to point C, where \( MPL_f = w_f' + T_f \). On the other hand, if more workers are now in the informal sector, they can only be employed if their wages fall, from \( w_i \) to \( w_i' \); this allows informal sector firms to increase their employment from point A to G, where the \( MPL_i = w_i' \). Note that at the wages \( w_f' \) and \( w_i' \), workers are indifferent between formal and informal employment because \( (w_f' + \beta_f T_f) = w_i' \).

Consider now the first messages above. The productivity of formal sector workers is \( (w_f' + T_f) \), while that of informal workers is \( w_i' \). Since \( w_f \) and \( w_i \) moved in opposite directions, it is now the case that formal sector workers are more productive than informal sector workers. But this is not the result of them being more educated; nor is it the result of a barrier to entry into formal employment. The differences in productivity between similar workers are caused by an undervalued social security system. These differences in productivity matter: the country’s GDP will fall. And since the country is poorer than before, everybody is worse off. Note also that since formal sector firms face higher labor costs they are less competitive than before; that is why they employ fewer workers and their output is less.

Turn now to message two. Because \( (w_f + T_f) > (w_i' + \beta_f T_f) \), formal workers are not as well off as before. And because \( w_i' > w_i' \) informal workers are also not as well off as before. Thus, the fact that social security does not work well hurts all workers, formal and informal. In turn, because formal sector output is less and labor costs are higher formal firms’ profits are reduced. Yet this is not because profits were redistributed to wages, since workers are also worse off than before. It is because the fact that \( \beta_f < 1 \) acts
like a tax on wages and profits in the formal sector. And note as well that fewer workers are covered by social security, given the growth in informal employment. Contrary to the government’s social objective, fewer workers have access to IMSS health services and are saving for their retirement in their Afore.

Consider finally message three. Now informal employment without social security coverage is not only the product of a legal design that ex-ante excludes non-salaried workers from social security coverage; it is also the result of the fact that the social security system does not work well. The result is not surprising: if firms and workers are being forced to pay for something, but are receiving less than that, they will do something. And if they have no means to address the reasons why social security works badly, they will turn to informality as a natural response. The fact that GDP falls and that workers are less productive as a by-product of their behavior is something that they are probably unaware of, and may not care about.24

It is easy to see that the loss of productivity and competitiveness, the reduction in the coverage of social security, the growth in informal employment, and the reduction in workers’ standard of living will deepen as $\beta_f$ gets closer to zero. In the limit, when it is zero, social security contributions turn into a pure tax of 30% of the wage bill.25 This is clearly not the case in Mexico. But the point is clear: any factor that contributes to lower workers’ valuation of social security will reduce equity and hurt the productivity of the economy.

Before turning to the 1995 reform, one more remark on productivity. As $\beta_f \to 0$ incentives for firms and workers to evade social security increase. As noted, this phenomenon is very large in Mexico. Evasion of workers has a mirror image in evasion by firms. But because the probability of being detected and fined by IMSS or INFONAVIT increases with the number of workers that are not registered, evasion is mostly concentrated in small and micro firms.26

24 The analogy with Hirschman’s “exit” given the ineffectiveness of “voice” is direct; see Hirschman (1970). There is also a problem of collective action, as the response to $\beta_f < 1$ occurs by hundreds of thousands of firms and millions of workers acting individually, and it begs the question as to the response of Congress or the Executive; see section VIII below.

25 The tax can potentially be higher than that, because formality also implies coverage by severance pay legislation that also causes a wedge between firms’ labor costs and workers’ earnings, and by labor taxes.

26 According to IMSS records in 2005 there were approximately 550,000 registered firms with up to five workers employing a total of 1.2 million workers, with an average firm size of 2.2 workers. But the Economic
So, aside from reducing the coverage of social security, evasion also affects firms’ size. Some firms will find it profitable to keep small in informality, as opposed to medium or large in formality. But this reduces firms’ possibilities of exploiting economies of scale or having improved access to formal credit and, more generally, to innovate and invest in training their workers. Combining informality with illegality is doubtfully the best strategy if these firms are to grow larger and more productive. And although this behavior is clearly the result of many factors, a large implicit “tax” on salaried employment is one of them (particularly for firms where labor costs are a large share of total costs). Although not formally incorporated in the discussion above, the productivity costs of an undervalued social security system must also include the costs associated with a very large number of stagnant firms, who do not innovate, do not invest in training their workers, and do not exploit economies of scale.

The next two sections focus on some of the reasons why two central components of social security --retirement pensions and health services-- might be important elements within a larger set of factors affecting the performance of Mexico’s social security system. It is critical to emphasize, however, that I do not argue that the only problems with social security are in these two areas; or that the problems in these two areas are only caused by the factors examined below. This is not the case. On one hand, a revision of the functioning of INFONAVIT, of day care services and other components of social security would show similar problems. On the other, the problems facing retirement pensions and health services have multiple causes. Nonetheless, I do argue that the factors identified below are among some of these causes, and that these factors are associated with large rents or otherwise concentration of power or control of two key groups involved in the administration and provision of retirement pensions and health services. In these two cases, low productivity and lack of competitiveness are associated with income or power concentration, and better regulations to lower rents or reduce concentration of power or control would simultaneously be a move in the direction of more competitiveness and more equity.

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Census for 2004 records approximately 2.8 million small and micro firms employing 6.8 million workers, with an average firm size of 2.4 workers per firm. These numbers probably underestimate the extent of evasion as the Census excludes firms in rural areas.

27 In particular, Mexico’s epidemiological transition has increased the costs of providing health services while the erosion of real wages associated with the countries’ various macroeconomic crisis has reduced IMSS’s wage-based revenues. See IMSS (2003, 2004, 2005 and 2006) for a discussion and quantification of these elements.
IV. The 1995 Pension Reform

IV.1 Background

In December 1995, as Mexico’s economy recovered from the deepest economic crisis in half a century, Congress approved a new Social Security Law whose main feature was the replacement of a defined-benefit pay-as-you-go retirement pension regime by a defined-contribution pre-funded regime. An important operational characteristic of the new regime was that workers’ retirement savings would be deposited in individual accounts administered by private financial intermediaries, Afores. To regulate the latter a new agency was created, the Comisión Nacional del Sistema del Ahorro para el Retiro (CONSAR). As of July 1, 1997 when this new scheme came into effect, IMSS would no longer be responsible for workers’ retirement pensions, although it would still collect workers’ and firms’ contributions for retirement savings, which in turn would transfer to the Afores.

The 1995 Law established a transition regime for all workers affiliated with IMSS up to June 30, 1997. While these workers --labeled the transition generation-- would have individual accounts with an Afore, they would retain the option of retiring under the provisions of the previous 1973 Social Security Law. If they did so, savings accumulated in their Afore account would be transferred to the federal government, who in turn would pay for their pensions out of general revenues; if they did not, and opted instead for retiring

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28 Many reasons induced the government to effect this change, but three can be mentioned. First, IMSS given Mexico's demographic transition IMSS would soon be unable to cover the pensions of workers retiring by the end of the 1990's unless contribution rates were significantly increased by more than 14% of wages, particularly so since IMSS had not created any financial reserves. Indeed, in 1995 it was estimated that over the coming years the rate of growth of pensioners would double the rate of growth of active workers. Second, the vertically integrated nature of IMSS as a provider of health services and retirement pensions had de facto implied that contributions for retirement pensions were being used to invest in health infrastructure. Third, the 1994-95 economic crisis was very much associated with a low national savings rate, and a pre-funded scheme was thought to contribute to increase aggregate savings, accompanied as it was by budgetary cuts to pay for the costs of the transition generation.

29 It is conceptually important to separate two features of the 1995 reform that are usually lumped together: a pre-funded defined-contribution pension scheme, on one hand; and the administration of workers’ contributions in individual accounts by private financial firms, on the other. One can think of a pre-funded defined-contribution scheme with individual accounts administered by a public agency (not necessarily IMSS), or by a public-private entity. The choice is not so much associated with macroeconomic considerations as it is with agency and political-economy issues: who can manage the funds with the best risk-reward combination? What institutional arrangement avoids the potential deviation of funds to other uses? The 1995 reform tried to solve these problems by making workers the owners of the funds in the accounts, and by having private firms manage the accounts. Clearly, however, many other combinations are possible while keeping the pre-funded nature of the regime, and its positive effects on aggregate savings and the country’s financial system.
on the basis of the 1995 Law, savings accumulated in their Afore account would be used to purchase an annuity at the time of retirement, just as workers enrolled after July 1997 --labeled the new generation. Differently put, the difference between the transition and the new generation was that the former could choose between the pay-as-you-go defined benefit scheme of the 1973 Law or the pre-funded defined-contribution scheme of the 1995 Law; the latter were obliged to retire under the provisions of the 1995 Law.

Savings channeled to an Afore account derive from two sources. First, from a traditional workers’ and firms’ wage-based contribution equivalent to 6.5% of the workers’ wage. Second, from a new government subsidy to workers’ retirement account of equal amount for all workers --labeled “cuota social” and paid for out of general tax revenues. This government subsidy had two purposes: one, incorporating a redistributive component to retirement pensions as the subsidy was proportionately larger for lower wage workers; two, to increase the amounts accumulated in workers’ Afore accounts so that they could all aspire to a pension of one minimum wage or more. This second purpose in turn would insure that no additional fiscal contingencies would arise from the new scheme beyond the costs of the pensions of the transition generation under the 1973 Law, as a government guarantee of a minimum pension equivalent to one minimum wage was another feature of the 1995 Law.

An assessment of the 1995 reform must incorporate at least two dimensions. One, the macroeconomic dimensions associated with its effects on aggregate national savings, and with the potential of the Afores to deepen and widen Mexico’s financial sector facilitating longer term investments through a stable supply of financial savings with a long term horizon. Two, the microeconomic dimensions associated with its effects on workers’ pensions, Afore profits, the incentives to save and the contribution of forced savings for retirement to workers’ overall valuation of formality and social security coverage. In turn, CONSAR’s role as a regulatory agency encompasses these two dimensions. On one hand, the investment regime of the Afores (composition of the portfolio, risk-levels, time-profile of investments and the like). On the other, the industrial organizations aspects of the industry: entry of

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30 This subsidy is set at 5.5% of a minimum wage of 1997 indexed to the CPI and is approximately equivalent to 1,030 pesos of 2006 a year (or about US$ 94). When the uniform cuota social is added to the wage-based contribution by firms and workers, the average contribution to the Afore account is 8.4% of the wage. In addition, there is a contribution of 5% of the wage for INFONAVIT which is also deposited in the Afore account. This implies that for those workers who do not get a housing loan (particularly low wage workers), the savings rate is around 13.4% of the wage, 11.5% out of wages (=6.5% + 5%), and 1.9% equivalent from the cuota social.
new Afores, information to workers, rules for changing workers’ accounts from one Afore to the other and, critically, commission levels. In the reminder of this section I focus only on this second dimension, in the understanding that by doing so I provide only a partial assessment.³¹

IV.2 Afore Profits and Workers’ Valuation of Retirement Savings

Any system of forced savings, by definition, imposes some costs on workers to the extent that the composition of their consumption between the present and the future is altered contrary to their preferences. But to preclude potentially myopic behavior by workers, free-riding by some, or for other reasons not explored here, many governments oblige workers to save for retirements as part of their social security systems. In the absence of cross-subsidies between workers and of external subsidies, a scheme where forced savings occurs in an individual account has potentially larger benefits for a worker, as the results of the worker’s savings efforts are fully reflected in his future pension. Further, the worker’s individual account follows him though his entry and exit into the labor force, and through any job once he is in the labor force. Contributions and benefits are in principle brought closer together.

For these reasons it is reasonable to suppose that if a worker is forced to save, and if per-worker subsidies are the same for any system of forced savings, the worker will prefer an individual retirement account. This judgment, however, needs to be pondered by the net risk-adjusted rate of return on the worker’s individual account, resulting from the interplay between the gross rate of return in the portfolio invested on his behalf by his Afore, and the commissions charged by the Afore for managing his account. Thus, from the point of view of the worker the superiority of an individual account managed by a private firm over an alternative scheme of forced savings is not absolute.

The 1995 reform relied on competition between Afores to bring commissions in line with Afores’ administration costs, in principle maximizing the benefits of the new scheme for workers. Implicit in this mechanism were three critical assumptions: (i) that the regulatory regime of the Afores would be conducive to intense competition between them; (ii) that workers would have access and be able to process the information to make a rational choice among Afores, and (iii) that workers would have the incentives to make choices

compatible with a competitive outcome. Differently put, the 1995 reform implicitly assumed that a “market for forced retirement savings” could be created, and that this market could under proper regulation produce a competitive outcome, with Afores’ commissions basically reflecting Afores’ marginal costs. Nine years after the reform, however, it is clear that these three critical assumptions have not been a reasonable approximation to the nature of the industry, at least during its first eight years. To the contrary, what has been observed so far are net rates of return to workers that have been substantially below expectations and, in parallel, substantial rents to the Afores.

Table 4 compares Afores’ profits (approximated by the earnings before income taxes, depreciation and amortization, Ebitda, indicator) and Afores’ income from commissions with government subsidies to workers’ Afore accounts (the cuota social) over the last eight years.

### Table 4
**Afore’s Income from Commissions, Profits and Subsidies, 1998-2005**
(millions of pesos)

<table>
<thead>
<tr>
<th></th>
<th>Profits (Ebitda)</th>
<th>Income from commissions</th>
<th>Pension subsidies (cuota social)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>1,283</td>
<td>4,778</td>
<td>5,297</td>
</tr>
<tr>
<td>1999</td>
<td>3,083</td>
<td>6,958</td>
<td>7,201</td>
</tr>
<tr>
<td>2000</td>
<td>3,868</td>
<td>8,779</td>
<td>8,343</td>
</tr>
<tr>
<td>2001</td>
<td>5,175</td>
<td>10,390</td>
<td>9,798</td>
</tr>
<tr>
<td>2002</td>
<td>6,160</td>
<td>10,960</td>
<td>9,984</td>
</tr>
<tr>
<td>2003</td>
<td>7,240</td>
<td>12,173</td>
<td>8,778</td>
</tr>
<tr>
<td>2004</td>
<td>6,996</td>
<td>13,119</td>
<td>11,081</td>
</tr>
<tr>
<td>2005</td>
<td>6,070</td>
<td>13,726</td>
<td>11,947</td>
</tr>
</tbody>
</table>

Source: Pension subsidy figures (or cuota social) are from the Cuenta de la Hacienda Pública Federal of the corresponding year published by the Secretaría de Hacienda y Crédito Público. Afore’s Ebitdas and income from commissions from www.consar.gob.mx/estadisticas/index.shtml.

Notes: Ebitda = earnings before income taxes, depreciation and amortization. Data is not presented for 1997 as the reform only operated for six months.

It is noteworthy that for six out of the last eight years, Afores’ income from commissions has exceeded government subsidies for workers’ retirement pensions. For the period as a whole Afores’ income is 1.1 times the cuota social. The implication is simple but powerful: since the start of the 1995 reform up to 2005 the full amount of government subsidies to workers’ retirement savings have been absorbed by Afore commissions! In fact, these have exceed government subsidies by 10% meaning that the Afores have also absorbed part of workers’ and firms’ contributions into the system.
Table 5 presents the results of calculating for six Afores that jointly represent over 70% of all accounts the annualized real rates of return to workers’ savings net of commissions over the period 1997-2005. Note that these differ between Afores and wage levels, for the following reasons. First, because the rates of return on the Afores’ investment portfolio differ as a result of variations in investment strategies across Afores. Two, because the composition of commissions differs between Afores.\textsuperscript{32} And three, because the differences in the composition of commissions have a different incidence depending on the worker’s wage level: while the cuota social is the same for all wage levels, the flow commission is not charged on this component of the resources channeled to the account that is relatively more important for lower wage workers. Note as well from table 5 that the contribution density --the share of a worker’s active life during which he contributes to his pension-- is a decreasing function of the wage level. This is in agreement with the IMSS registries shown in table 2, and is a reflection of workers’ transits from formality to informality.

<table>
<thead>
<tr>
<th>Wage level</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution density</td>
<td>47%</td>
<td>61%</td>
<td>77%</td>
<td>79%</td>
</tr>
<tr>
<td>Santander</td>
<td>0.8</td>
<td>0.5</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>BBVA</td>
<td>1.1</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>GNP</td>
<td>1.2</td>
<td>0.9</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>ING</td>
<td>1.3</td>
<td>1.0</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Banamex</td>
<td>1.5</td>
<td>1.2</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Inbursa</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Source: author’s calculation with data from [www.consar.gob.mx](http://www.consar.gob.mx). Notes: wage level is measured in multiples of the minimum wage. Contribution density measures the share of worker’s active time in the formal sector enrolled with IMSS and contributing to an Afore.

\textsuperscript{32} Commissions are of two types: a commission on the stock of accumulated resources in the account, and a commission on the flow of resources that are continuously deposited in the account. Afores choose any combination of these two (although approval by CONSAR is required). In addition, Afores can also offer commission discounts after a given length of stay in an Afore. In 2006 flow commissions ranged from a low of 0.5% to a high of 1.64% and stock commissions from a low of 0.15% to a high of 1.48%. Discounts from “permanence” vary widely across Afores; see Madero and Mora (2006). Once these three elements are considered the resulting structure of commissions is very complex, as the net effective cost to a worker depends on his age and the years necessary to retire, his effective time contributing to the system given his patterns of (future!) transition between formality and informality, and his present (and future!) wage. The worker, on the other hand, also has to consider the rates of return on the Afores investment portfolios.
The results are indeed striking. The simple average of these rates over the period is less than 1%.\textsuperscript{33} I note as well that the first five Afores have slightly more than half of the whole market. In these Afores the average annual net rate of return over the last nine years to workers savings has been in the order of 0.7%. These rates of return are comparable to what a worker would get in an ordinary savings account at a bank, except for the fact that in the Afores there can be no drawings from the account until retirement age and the Afore cannot serve as collateral for any loan, while in an ordinary savings account drawings can occur at any point, and resources can be used as collateral if necessary.\textsuperscript{34}

These results are relevant as they provide a measure of the costs that a worker incurs not because he saves, but because he is forced does so in an Afore (so in both cases he incurs in the costs of postponing current consumption). A simple example captures best this cost. Assume a worker who saved 100 pesos each year over the last eight years. If he had done so in a savings account with a rate of return of 3.5% at the end of the eight year he would have 936 pesos; if he was forced to save in an Afore instead with a rate of return of 0.9% he would have 833 pesos, a difference of 103 pesos, or 12% in just eight years. Depending on the length of his working life, such differences in rates of return if maintained in the future could account for a pension that is 30% lower.

The other side of the net rates of return to workers’ savings paid so far are Afore profits. Graph 2 compares the rates of return on equity on Afores and on the banks associated with an Afore. These are not directly comparable as the risks associated with each activity are different, but if a correction for these risks was introduced differences would probably widen.\textsuperscript{35} Nevertheless, they provide a evidence of another simple but powerful fact: over the last years Afores have been very profitable indeed. It is useful to note in this context that in a recent official opinion, Mexico’s Federal Competition Commission provides further evidence of monopoly rents (CFC, 2006). In 2005 revenues by the Afores as a proportion of administered funds were 2.1 times higher in

\textsuperscript{33} This rate should be contrasted with the 3.5% real rate of return that is usually assumed in long term actuarial calculations of Mexico’s pension system; see IMSS (2005).

\textsuperscript{34} Drawings from an Afore account can occur after sixty years of age if there is a loss of a job, or 65 if there is retirement.

\textsuperscript{35} This because the risks of lending by banks are on average higher than the risks faced by the Afores. One should also note that in some cases there could be cost allocation issues between an Afore and a bank members of the same financial group.
Mexico than in comparable Latin American countries. The Competition Commission also notes that rates of return on equity for the Afores are high from any perspective, and that they are not accompanied by any corresponding value to workers.

Graph 2
Rates of Return on Equity of Afores and Associated Banks, 2001-2005

Source: Author’s calculations with data from CONSAR and the Comisión Nacional Bancaria y de Valores.
Notes: ROR = Rate of return on equity. Includes data from Afore Banamex, Bancomer, Banorte, Inbursa, ING and Santander which jointly account for 70% of all invested funds.

One can conclude that ignoring the macroeconomic aspects of the 1995 reform and focusing only on the industrial organization issues, the system of channeling workers obligatory retirement savings to private administrators has so far generated large profits for the Afores and very low real rates of returns to workers’ savings, government subsidies notwithstanding. Aside from the obvious effects on income inequality, it is as important to note that in terms of the discussion of section III the net rates of return on Afore accounts observed to date contribute to workers’ undervaluation of social security benefits insofar as the savings for retirement component of social security has high unnecessary costs. All other components of social security equal, this hurts efficiency and lowers aggregate labor productivity.
IV.3 Is More Competition Enough?

Over the last few years legal reforms and regulatory measures by CONSAR have sought to increase competition and reduce Afores’ commissions. These measures have facilitated worker’s shifts from one Afore to another; have increased access to information; have reduced barriers to entry of new Afores; and have reduced the operating costs of the system. As a result of these measures new entry has occurred, workers shifts between Afores have increased and Afore commissions have fallen particularly in the higher cost Afores. The evidence shows that CONSAR has used its regulatory powers to gear the industry in the direction of more competition. As competition intensifies lower commissions will probably imply lower rents to the Afores in the years ahead and higher net rates of return on workers savings in the future, although little can be done about the rents realized over the last eight years.\footnote{But note, importantly, that lower monopoly rents need not imply a one-to-one reduction in commissions and higher pensions. This because Afore’s operating costs will increase as a result of more resources devoted to marketing, sales-personnel and the like in the context of a more contestable market.}

It is an open question, however, whether measures that only enhance competition will be sufficient to bring commissions in line with marginal costs, assuming more of these measures can be legislated and enforced. Because even if there are no barriers to entry and workers have full information --the hallmarks of a contestable market-- it is necessary to ask whether the design features of the 1995 reform are sufficient to produce a competitive outcome in a reasonably short time period given the nine years that have elapsed since the reform took effect; or whether these features will make such an outcome difficult to attain. This is important because if the latter is the case changes to the design of the system may be required for the 1995 pension reform to fully achieve its objectives, in parallel to the promotion of more competition.

A discussion of these issues is beyond the scope of this paper, but nevertheless four remarks can be made.\footnote{The discussion in Kotlikoff (2006) is interesting for these purposes.} First, note that for many of the workers belonging to the transition generation the option of retiring under the 1973 Law implies that the commissions they face on their Afore account are not very relevant. Under almost any scenario, but particularly given what has occurred already with the rates of return on their account over the last eight years, the 1973 pension will dominate the 1995 pension; for these workers competition or collusion between Afores is not an issue. Differently put, a very
important segment of the “demand” side of the market is “price” insensitive.\textsuperscript{38} The same occurs, second, with those workers whose savings will be insufficient to reach the guaranteed minimum pension: they are also price insensitive. In both these cases, in fact, it is the government that bears the costs of Afores’ high commissions and absence of appropriate incentives, since in both these cases pensions will be paid out of general tax revenues (with the accumulated savings in the Afore account devolved to the government).\textsuperscript{39} All this is consistent with workers acting with full rationality in a context of perfect information. Contrary to one of the implicit assumptions at the time of the 1995 reform, these workers have no incentives to choose rationally among Afores, because they are rationally choosing for a better alternative.\textsuperscript{40}

Third, it is important to ponder the nature of the demand for the “product” as all workers --from the transition or the new generation-- are obliged to purchase it. Consumer choices in this context are restricted to the administrator of his funds, the product of which he will consume twenty or thirty years hence. Given this, and the complex structure of commissions, more research is required to establish whether workers who do have a stake in the level of commissions can process this information appropriately and make rational choices (hopefully not influenced by the marketing techniques that could potentially be used to lure workers into a particular Afore).\textsuperscript{41}

Fourth, finally, it is important to ponder as well that at the time the 1995 Law was designed perhaps insufficient attention was paid to what is probably the most troublesome issue of all: the mobility of workers between the formal

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\textsuperscript{38} On July 1, 1997 this segment of the market was the whole market, as all workers who started in the Afores had rights under the 1973 Law. This segment will decline gradually as the transition generation retires, but this will take a long time, as the last worker enrolled in IMSS on June 30, 1997 may retire around 2027.

\textsuperscript{39} From this perspective one could argue that for the transition generation the Afore are an unnecessary intermediate step in acquiring a pension: resources are deposited in Afore accounts, profits are made on these accounts, the accumulated amounts on these accounts are devolved to the government, and the government, lastly, pays the pension out of general tax revenues (as if the government had lent resources to the Afores at an annual real rate of interest of around 0.9\%).

\textsuperscript{40} Workers from the transition generation must be enrolled in IMSS at least 500 weeks (approximately ten years) to qualify for a pension under the 1973 Law. If this is not the case, then they will obtain a pension on the basis of the amounts accumulated in their Afore.

\textsuperscript{41} The consumer in this market is an odd character. He clearly lacks perfect foresight and cannot discount the future appropriately, so is forced to save. At this point, however, he acts under perfect rationality and chooses the best Afore appropriately discounting the expected future costs of stock and flow commissions and incentives to permanence. Nevertheless, to protect him from the lure of some Afore’s marketing CONSAR regulations only allow him to switch freely between Afores if he chooses progressively cheaper ones according to CONSAR’s calculations.
and the informal sector, particularly of low wage workers, and the implications of this mobility for the length of periods during which workers are enrolled in IMSS and contributing to an Afore, and thus for the size of retirement pensions.

With the benefit of hindsight these are issues can now be placed under discussion. The 1995 reform was a fundamental transformation of Mexico’s retirement pension’s regime. Given the unviable nature of the previous pay-as-you defined-benefit system, change was necessary and inevitable. But the large Afore rents observed to date were certainly not an intended objective of the reform. They are, on the contrary, a feature that detracts from the objectives of the reform centered as it was on making the system fiscally sustainable, more equitable and efficient, and with greater coverage. And that is why it is so important to determine whether more competition in the “market for retirement savings”, by itself, can achieve this.

V. The 2004 Pension Reform

V.1 Background

Contrary to what one could expect from the discussion of section II, Mexico’s constitutional separation between private and public workers into segments “A” and “B” is not complete, as there are some public workers in segment “A”, among them IMSS workers (although there are no private workers in segment “B”). As a result, relations between IMSS and SNTSS (the IMSS union) are ruled by the same labor law as relations between any private firm and private workers represented by a union, i.e., by the Federal Labor Law. This is important for two reasons. One, workers in segment “A” have the right to strike while workers in “B” do not. Two, workers in segment “A” can negotiate as part of their labor contracts additional pension benefits beyond those established in the Social Security Law; this in contrast to workers in segment “B”, whose only pension benefits are established in the social security legislation pertaining to these workers (i.e., the ISSSTE Law).

The importance of the differences between segments “A” and “B” is highlighted by comparing the labor regimes of IMSS and ISSSTE workers (say, the doctors and nurses in both institutions who have similar qualifications and
ISSSTE workers cannot strike nor can they negotiate their pensions with ISSSTE directors; IMSS workers can do both. And in matters of pensions this asymmetry has resulted in a special regime for IMSS workers, labeled Régimen de Jubilaciones y Pensiones, RJP, negotiated over the years by the SNTSS with IMSS directors with no need for approval by Congress, or even by IMSS’s Board of Directors.43

This institutional arrangement generates profound incentive problems. On one hand, IMSS is a public agency whose liabilities have an implicit guarantee from the Federal Government, implying that bankruptcy does not follow when the organization’s net worth is negative; nor is it a credible option in the context of firm-union bargaining. On the other, the bargaining process is carried out under a legal framework that assumes symmetry between the parties. But the position of IMSS as a provider of health services to around 40% of the country’s population --making a strike a potentially catastrophic event for the government-- and the absence of a credible bankruptcy threat turns this into a de facto asymmetric bargaining situation, affecting the nature of the outcome.

Three more conditions have influenced the bargaining game between IMSS and SNTSS. First, for a long time SNTSS was part of the corporativist structure of workers organizations that played an important political role in supporting Mexico’s quasi-monopoly political party throughout much of the latter two thirds of the past century, the Partido Revolucionario Institutional, PRI. Second, IMSS-SNTSS bargaining was carried out in a context of little transparency and accountability. By its very nature RJP establishes long term benefits for IMSS workers and long term obligations for IMSS; yet until 2002 IMSS was not obliged to reflect the RJP-derived pension liabilities in its balance

42 The corresponding agency for IMSS in segment “B” is the ISSSTE, and for INFONAVT the FOVISSSTE. As with IMSS, medical services for segment “B” workers are directly provided by ISSSTE, which makes it the second largest provider of health services in Mexico, although about one-fourth the size of IMSS. There is no equivalent to CONSAR, however, as the pension regime of “B” workers is a pay-as-you-go defined benefit system administered by ISSSTE.

43 The first negotiation between IMSS and SNTSS establishing the special RJP pension regime took place in 1955, twelve years after the creation of IMSS in 1943, under the form of a pay-as-you defined benefit system additional to the pension of the Social Security Law. Since then, benefits were progressively increased in successive negotiations up to 1999, with the increased contributions being patently insufficient to cover additional benefits; see IMSS (2005, table III.1). The main characteristics of RJP are as follows: there is no minimum retirement age, with female/male workers retiring after 27/28 years of service; the pension is 130% of the last salary; pensions are indexed to wage increases of active workers; and workers contribute with 3% of their salary with the rest covered by IMSS. By contrast, other workers in segment “A” have a minimum retirement age of 65 years and an endogenous replacement rate given the defined contribution nature of the system (but rarely exceeding 50%), while contributing with 1.1% of their salary.
sheets or in its financial statements to Congress, nor to create reserves for these purposes. And third, the demographic structure of IMSS labor force implied that the costs of RJP would be borne gradually, with little immediate implications for those on the side of IMSS in charge of labor negotiations. The costs of servicing RJP have mattered only over the last fifteen years, though these costs have grown exponentially (and will continue to do so).

Table 6 makes a comparison between the RJP pension regime of an IMSS worker with that of a worker in segment “A” affiliated with IMSS.44 To facilitate the comparison the table assumes the same wage and a flat wage profile throughout both workers’ life.45

<table>
<thead>
<tr>
<th></th>
<th>IMSS Worker (RJP)</th>
<th>IMSS Affiliate (Social Security Law)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monthly wage</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>2. Years of service</td>
<td>27 female/28 male</td>
<td>40 all</td>
</tr>
<tr>
<td>3. Retirement age</td>
<td>52.5 years on average</td>
<td>65 years</td>
</tr>
<tr>
<td>4. Monthly pension</td>
<td>6,450</td>
<td>2,106</td>
</tr>
<tr>
<td>5. Total income during retirement</td>
<td>2,557,425</td>
<td>506,415</td>
</tr>
<tr>
<td>6. Pension income not financed by worker’s contribution</td>
<td>2,449,765</td>
<td>450,451</td>
</tr>
<tr>
<td>7. Indexing rule</td>
<td>Wages of workers</td>
<td>CPI</td>
</tr>
</tbody>
</table>


In addition to the obvious differences in replacement rates (1.29 vs. 0.42) and in years of retirement (12.5 more on average for IMSS pensioners), it is useful to call attention to the differences in the amount of the pension not contributed by the worker, which in this example is almost 2 million pesos (or

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44 All IMSS workers are subject to the Social Security Law, and therefore entitled to a pension under the provisions of this Law. Thus, IMSS workers have their Afore accounts. The RJP pension regime is complementary to the Social Security Law pension regime. IMSS as a firm employing workers is obliged to pay for any difference between RJP benefits and the Social Security Law pension. Note that this makes IMSS workers fully indifferent with regards to their Afore account, as whatever the rates of return and the commissions, they are under a defined benefit system. In reality, it is IMSS who cares about the performance of IMSS workers’ Afore accounts, as the lower is the amount saved, the higher are its RJP pensions costs.

45 This is done only for comparison purposes. The average wage of an IMSS worker is double that of an IMSS affiliate. Even for comparable occupations, IMSS workers’ wages are higher than non-IMSS.
about US$180,000). This is a significant sum for somebody who earned 5,000 pesos a month over his working lifetime, and derives only from the fact that the IMSS worker has RJP rights, while the worker affiliated to IMSS has the pension rights of the Social Security Law; call this the RJP-rent.

If there were no barriers to entry into IMSS this rent could not be sustained. But this is not so because yet another feature of the IMSS-SNTSS labor contract is that entry is determined by SNTSS. And while this may not be the case, it is not difficult to conceive that a market for entry rights into IMSS could arise given the demand for entry into a job with a large rent, on one hand; and the control of the supply of entry into IMSS by SNTSS, on the other. If this hypothetical market operated an entry fee by the potential entrant would need to be paid to SNTSS, up to the value of the RJP-rent associated with entry into IMSS. Of course, the total RJP-rent would be the product of the per worker rent times the number of new entrants, a potentially large sum in case such a market existed as even without any expansion in infrastructure the number of new entrants per year is over 11,000, as those retiring are replaced to keep the IMSS labor force constant. If such were the case, however, it is clear that the per worker value of the RJP-rent would be a direct function of the difference between the pension regime of an IMSS worker vs. the pension regime of an IMSS affiliate, i.e., between the net benefits of RJP and the net benefits of the Social Security Law pension.

46 This is a formal comparison assuming that the firms’ contribution to a workers retirement account --part of Tt in section III-- is actually borne by the firm and not shifted to the worker via lower wages. Shifting firms’ contributions to workers is probably the case for workers in private firms given free mobility of labor. But IMSS is not characterized by free mobility of labor, and the share paid by IMSS for the worker’s pension is not shifted to him. Further, the IMSS labor contract states that all social security contributions that formally correspond to the worker are also paid by IMSS. As a result, the differences in the share of the pension between IMSS workers and IMSS affiliates not paid by each are much larger, and so are the rents that I refer to below. For the purposes of the argument this is sufficient, however.

47 Actual RJP rents are larger, because most IMSS workers earn more than 5,000 pesos a month. The average wage of an IMSS worker is about 11,200 pesos a month.

48 If such a market existed the exact distribution of the RJP-rent between the would be entrant and the SNTSS would depend on the elasticities of supply and demand in the standard fashion.

49 If such a market existed the entry rent would not only reflect differences in pension regimes, but other differences in labor contracts like days of vacation, special perks, and the like. I ignore this here as these factors, while important, are quantitatively secondary to pension benefits.
not affecting at all the welfare of existing IMSS workers—, would nonetheless reduce rents to the SNTSS.\textsuperscript{50}

Who pays for the benefits of RJ P? As mentioned, IMSS workers contribute with 3% of their salary and the rest is covered by IMSS. But since IMSS revenues derive mostly from the social security contributions of firms and workers affiliated with it, one can conclude that most RJP-rents are paid for by IMSS affiliate workers and by the firms that hire and register them with IMSS.

From 1966 (when the first IMSS workers began to retire under RJP) to 2004 the accumulated cost of this regime has been 165,590 million pesos, of which 24,198 have come from IMSS workers’ contributions (i.e., their 3% fee) and 141,392 million from IMSS (i.e., from the social security contributions of firms and workers affiliated with IMSS).\textsuperscript{51}

Since the figures above refer to the accumulated costs of RJP so far they hide the time-profile of expenditures which are a function of the demographic dynamics of the IMSS labor force. Two additional figures are useful to show how these costs have been borne mostly over the last years, and how they affect IMSS operations. First, over the period 1994-2004 total IMSS contribution to RJP (excluding IMSS workers’ 3% fees) have been 122,256 million pesos; in the same period, accumulated investment by IMSS, including investments in hospitals, clinics, medical equipment and the like to provide medical and other services has been 32,110 million—a ratio of 3.8 to one. Two, in 2005 IMSS allocated 20,306 million pesos to RJP out of its total yearly budget; this in contrast to 45,432 million pesos for medicines, materials, medical equipment, day care services and operating expenditures to provide services to almost 40 million beneficiaries (affiliated workers and their families).

\textsuperscript{50} This might not be fully correct to the extent that new entrants may be relatives or acquaintances of existing workers, and to the extent that the latter incorporate into their own valuation of their job the possibility that their relatives or acquaintances enjoy as well a similar RJP-rent.

\textsuperscript{51} These figures are in 2004 pesos and include reserves for RJP but exclude government subsidies for pensions derived from the 1973 Social Security Law. Including the latter, the total cost of IMSS workers pensions over the period has been 209,624 million pesos. However, I exclude government subsidies from the calculations as this is the cost of the pension that any worker is entitled to, IMSS or no-IMSS; I focus only on the RJP cost of pensions. On the other hand, the actual flow of payments for RJP pensioners has been 131,386 million, with 24,198 coming from workers, and 107,188 from IMSS; see IMSS (2005, graph III.3); the reminder 34,204 million are reserves for RJP that are also a cost to IMSS but not yet a benefit to IMSS workers. These 131,386 million pesos have benefited about 120,000 IMSS pensioners.
Table 7 shows the evolution of IMSS investment expenditures over the last quarter century. It is no surprise that the number of hospital beds per one thousand beneficiaries has fallen from 1.85 in 1980 to 0.83 in 2005, and the number of doctors offices at first level health clinics from 0.60 to 0.42.\(^{52}\)

Table 7
IMSS Investment and Beneficiary Population, 1981-2005
(millions of pesos of 2004)

<table>
<thead>
<tr>
<th></th>
<th>Investment</th>
<th>Beneficiaries*</th>
<th>Investment per Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981-1985</td>
<td>18,579</td>
<td>28,339</td>
<td>655</td>
</tr>
<tr>
<td>1986-1990</td>
<td>17,415</td>
<td>35,250</td>
<td>494</td>
</tr>
<tr>
<td>1991-1995</td>
<td>15,744</td>
<td>36,806</td>
<td>427</td>
</tr>
<tr>
<td>1996-2000</td>
<td>17,238</td>
<td>41,951</td>
<td>410</td>
</tr>
<tr>
<td>2001-2005</td>
<td>17,396</td>
<td>44,103</td>
<td>394</td>
</tr>
</tbody>
</table>

Source: IMSS (2005, table IX.35); * thousands of people.

Unfortunately, most of the costs of RJP are yet to be borne. Over the next decade the number of IMSS workers that will reach retirement age will double the existing stock of retired workers, and the rate of growth of IMSS expenditures in RJP will increase much faster than any reasonable increases in IMSS revenues given growth in formal employment. As a result, resources left over to provide medical and other services for IMSS beneficiaries will decline continuously. More precisely, it is estimated that operating and capital expenditures per beneficiary will decline from 847 pesos in 2004 to zero in 2025. The implications for the future quality of health services at IMSS are obvious, particularly so if one considers that the 847 spent in 2004 for these purposes are already insufficient to provide IMSS affiliates with reasonable medical services, and that no medical services can be provided at all if there are no medicines and other intermediate inputs.\(^{53}\)

V.2 A Preliminary Step

With the exception of a few officials at IMSS and the Finance Ministry and IMSS Board members, the nature of RJP and the problems associated with

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\(^{52}\) See (IMSS, 2006, graphs X.8 and X.9).

\(^{53}\) See IMSS (2005, table III.12). On the other hand, IMSS estimates that the investments in medical equipment and infrastructure to provide reasonable services to the existing stock of beneficiaries are in the order of 44,930 million pesos (2005, table IX.33). This is a rough measure of the accumulated lag in health services. But even if this infrastructure was in place, IMSS would lack the resources for labor and operating expenses. Lags in the coverage of day-care services are larger, but not mentioned here as the discussion focuses on health.
it were little known. In 2001, however, Congress approved a proposal by President Fox to modify the Social Security Law and place IMSS under a new regime of transparency and accountability. In particular, the reform obligated the IMSS Board to deliver to the President and to Congress an annual report certified by external auditors with, among other elements: (i) an actuarial valuation of its pension liabilities, (ii) a net income statement produced with the accounting standards applied to private firms, and (iii) a balance sheet expressing the institutions net worth. Table 8 provides a summary of this information, in the understanding that up 2002 the figures including the proper valuation of the costs of RJP were not publicly known.

Table 8
IMSS Net Income and Net Worth, 2001-2005
(millions of pesos)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>without RJP</td>
<td>37</td>
<td>63</td>
<td>48</td>
<td>241</td>
<td>200</td>
</tr>
<tr>
<td>with RJP</td>
<td>-18,606</td>
<td>-19,962</td>
<td>-17,004</td>
<td>-32,210</td>
<td>-68,047</td>
</tr>
<tr>
<td><strong>Net worth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>without RJP</td>
<td>78,776</td>
<td>61,143</td>
<td>63,538</td>
<td>68,349</td>
<td>58,702</td>
</tr>
<tr>
<td>with RJP</td>
<td>-41,028</td>
<td>-61,511</td>
<td>-75,692</td>
<td>-92,669</td>
<td>-81,662</td>
</tr>
</tbody>
</table>

Notes: without RJP refers to results without the full registry of RJP costs; with RJP refers to full registry according to generally accepted accounting practices.

The report to the President and Congress includes as well the net present value of the RJP pension liabilities. Valued at the end of December of 2005 these equaled 775,975 million pesos, equivalent to 9.3% of that year’s GDP. This sum corresponds to the pension liabilities of a total of 504,054 workers, of which 139,572 are already retired and 364,482 who will do so over the next 28 years.

Transparency was not the only objective of the 2001 reform. A second key feature for the purposes of this paper was a new provision to force IMSS to create reserves for RJP and, equally important, to insure that as of that date, the future pension costs of new entrants were gradually reserved as of the time of entry, such that at the time of their retirement there would be sufficient reserves in the RJP Pension Fund to cover their future pension. This was very important, as IMSS was now obliged to internalize the full costs of hiring personnel, eliminating the possibility of ignoring these future costs in its decisions to expand its medical and other infrastructure and hire personnel. In
consequence, the 2001 reform aligned the real social costs of personal services at IMSS with the costs faced by the institution in its day to day operations.54

Critically, however, the 2001 reform did not specify where the funds for reserving future pensions would come from; this was the object of the more precise and profound 2004 reform. Nonetheless the new regime of transparency reached a fundamental objective: the problem of RJP was no longer an internal issue of IMSS only, but was now the joint responsibility of the President and Congress as these two branches of government had been officially notified of the problem and therefore could no longer ignore: (i) that the institution was in deep financial trouble and its ability to provide appropriate health and other services to its beneficiaries already seriously undermined; and, (ii) that in the absence of corrective measures IMSS was, literally, heading towards operational collapse. The presentation of the first report, in June 2002, was also accompanied by a decision of the IMSS Board to make the situation widely known to the general public through the national media.

V.3 A Definite Step, an Odd Step or a Reverse Step?

In October 2004, this time under the initiative of Congress, the Social Security Law was reformed again with a single purpose: IMSS not only had to fully fund the RJP obligations of new entrants, but to do so it could not use IMSS resources.

To understand the implications of this it is important to note, first, that the reform in no way modified the existing IMSS-SNTSS labor contract; in fact, Congress does not have the power to do so. On the other hand, second, Congress has full powers to legislate on matters concerning the use of public monies, and since IMSS monies are public monies, Congress can legislate as to what IMSS may or may not do with the social security contributions that it collects and the subsidies that it receives from the government.55 The reform imposed a constraint on IMSS, not on SNTSS or the labor contract. In parallel, third, it is important to note that the Federal Labor Law stipulates that

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54 Differently put, the reform de facto obliged IMSS to convert the pay-as-you-go nature of RJP into a capitalized pre-funded scheme (although without individual accounts, as the funds are managed by IMSS in a separate fund that is legally not part of its patrimony as it belongs to IMSS workers).

55 From the fiscal point of view social security contributions have the same status as taxes, and IMSS can and is obliged to use the provisions of the Federal Fiscal Code to collect them. Further, the use of all IMSS resources by IMSS is subject to audit by the relevant authorities in Congress and in the Executive Branch.
every two years parties in a labor contract have the right to renegotiate various clauses or even the full contract.

The implications of the 2004 reform are simple but powerful: IMSS could no longer hire a new worker without renegotiating the labor contract with SNTSS; and at the time of such renegotiation it could no longer sign the contract unless the RJP costs of new workers were fully borne by these workers, because IMSS could not sign any contract contrary to existing Law.

It is important to note that the reform, on the other hand, allowed IMSS to continue to use its resources to pay for the RJP obligations of existing worker, thus leaving their rights untouched. The reform left as well the rights of new entrants to a pension according to the Social Security Law untouched, as any other worker in segment “A”. It also did not prohibit IMSS from covering the share of workers’ contributions to the standard Social Security Law pension (i.e., their Afore account), as it was doing for workers already hired. Nor did the reform eliminate RJP for new workers; or imposed any constraints on its characteristics. New entrants could continue to retire after 27/28 years and with a replacement rate of 1.3 if the SNTSS so wished; or they could do so with any other combination of retirement age and replacement rates. The only point of the reform was, de facto, this: whatever RJP was for new workers, it would have to be fully funded by them. Differently put: Congress legislated away the RJP rent.  

The 2004 reform separated IMSS workers into two groups: those hired prior to the reform --henceforth the “old” generation-- and those hired after that –the “new” generation. The accumulated RJP pension liabilities of the old generation could be serviced by IMSS, although the reform specifically stated that the terms in which these liabilities were to be serviced would follow from negotiations between the parties. These liabilities, as mentioned, are so large that they will be an increasing burden on IMSS for at least two more decades making operation practically unmanageable. But, critically, they would no longer grow.

There are three further substantive implications of the reform: legal, economic and political. I mentioned before that the institutional framework in which IMSS-SNTSS bargained over the labor contract was unbalanced, given the impossibility of bankruptcy or any other legal remedy to reduce a
contractual obligation whose burden, as shown, was increasingly unbearable. Congress modified this. In the face of an IMSS refusal to renew the existing RJP obligations for new entrants during the renewal of the labor contract, the SNTSS could no longer threaten with a strike as, indeed, there can be no legal strikes against the provisions of a Law. Further, by making it illegal for IMSS to renew RJP under the existing terms, Congress made credible the commitment to reform RJP. The refusal to continue using social security contributions to fund the RJP of new workers was no longer the reflection of the will of IMSS officials or Board members; it was the fulfillment of a legal obligation.

The second implication is this: the marginal cost of labor to IMSS would fall by a factor of over 60%, as now the costs of creating reserves for the RJP liabilities of new entrants would not rest on its finances. And to the extent that labor costs account for the largest share of providing medical services, the marginal social cost of IMSS as a provider of health services would also fall as well, dramatically. Of course, IMSS still had to face servicing the RJP liabilities of the old generation. But this was now a closed set and could be given the treatment of a sunk cost. In fact, after some negotiation over the terms of additional contributions by the old generation to reduce the burden on IMSS of these pension costs, these liabilities could be given the treatment of public debt whose profile and terms could then be arranged so as to minimize the distortionary costs associated with its service. By closing the RJP pension liabilities, and by legally prohibiting IMSS from establishing any further ones in the future, the moral hazard problem associated with the bail-out of a debt that IMSS cannot service without considerable further deterioration of its health services could be avoided.57

57 The analogy with the 1995 reform is clear. Prior to that reform the pension liabilities of all IMSS-affiliated workers were an obligation of IMSS, which could not service them without further reducing resources for health services. The 1995 reform transferred these liabilities from the IMSS balance sheet to that of the government. At the same time, the change to the defined contribution system insured that there would be no new pension liabilities from new IMSS-affiliated workers (ignoring the minimum pension guarantee). Finally, the pension liabilities of the old generation of workers transferred from IMSS to the government would be serviced by the government from general tax revenues; social security contributions were not increased for this purpose. Therefore, these liabilities --correctly from my point of view-- are not being covered with labor taxes, which is exactly what would happen if $T_f$ were increased. Following the discussion of section III, think what would happen to labor productivity, to the incentives to evade, to firm sizes and to informal employment if $T_f$ was increased to service RJP, with no improvements in the quality of health services (so that $\beta_f T_f$ falls).
The third implication, finally, was political: this was the first pension reform in almost a decade after the 1995 reform, and the first to reduce the pension rights of public sector workers, whether in segment “A” or “B” (if only for future ones). On one hand, the precedent for other public sector unions with similar pension regimes was important. On the other, the 2004 reform could be interpreted as the beginning of the unraveling of the special position held by public sector unions, in a context where the economic costs imposed by these unions are increasing, and their political role modified. It is noteworthy, in this context, to note that the reform was supported by most PRI legislators in Congress.

In October 2005 IMSS and SNTSS faced the first renewal of the labor contract after the 2004 reform. The RJP provisions for new entrants were modified. These would now retire after 34/35 years of service with a minimum retirement age of 60 years, and with a replacement rate of 1.00. But despite the reform, the new generation of workers will not fund fully these revised RJP benefits. To do so, the contribution rate should have been 23% of their salary, as opposed to the 10% specified in the labor contract. In fact, new workers are funding less than half of the costs of their future pensions. Despite the intention of Congress the RJP-rent will still be there for new entrants, diminished but nonetheless positive.

The provisions of the 2004 reform were by-passed by raising the contributions of the old generation of workers from 3 to 10% of their salary. There resources, however, are not used to contribute to the financing of their own RJP pensions liabilities (which would lower the burden on IMSS of servicing these liabilities releasing resources for capital and operating expenditures to improve services). Rather, they are used to finance the difference between what new workers should contribute according to the Law to fully fund their RJP, and what they will contribute, i.e., to finance the difference between the 23% contribution rate needed to fund the agreed-upon benefits and the 10% agreed-upon contribution. The by-pass of the 2004 reform thus resulted in a perhaps unique innovation: a “reverse” pay-as-you-go

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58 In the year that elapsed between the reform and the labor contract renegotiation IMSS did not hire any new workers and out-sourced health services when they could not be provided in-house in cases where medical personnel retired.

59 The 23% rate reflects the fact that the retirement age is relatively low given increasing life-expectancy, particularly of new entrants; that RJP incorporates ascendancy and dependency pensions and additional benefits for work-risk or disability pensions; and because the replacement rate is relatively high.
pension scheme where the old generation of workers subsidizes the pensions of workers that are about to enter IMSS.\(^{60}\)

The new RJP provisions of the labor contract, however, are unsustainable: as the generation of old workers retires, the number of people contributing 7% of their salary to subsidize the pensions of the new entrants shrinks; in tandem, the number of new entrants requiring a subsidy for their future pension increases. When the scheme is exhausted, a new-new RJP will have to be negotiated if the Law is not to be further by-passed.\(^{61}\) There will then be three different types of active workers in IMSS with three different RJP’s: the old generation hired prior to October 2005; the new generation hired under the auspices of the October 2005 contract; and a new-new generation hired with a different RJP in a still to be negotiated contract.

In the meantime, as a result of the “reverse” pay-as-you-go use of 7% of their salary, the old generation of workers will have contributed about 50,000 million pesos to the pensions of the new generation of workers and not their own; their working conditions in terms of access to infrastructure, equipment or intermediate inputs will fail to improve as a result of their additional effort; and their future pension will be no more secure.\(^{62}\) And, evidently, IMSS will have lost 50,000 million pesos of workers’ contributions to reduce the burden of the RJP of the old generation, and will have to cover them out of the social security contributions of affiliated workers and firms --which is what the 2004 reform sought to avoid.\(^{63}\) But the RJP-rent will still be there, at least for a few more years.

\(^{60}\) The scheme is in fact a “double” or “mixed” pay-as-you-go system. Of the 10% contribution rate of the old generation of workers, 3% goes to pay the pensions of the already retired, as in any traditional pay-as-you-go. The other 7% goes to subsidize the pensions of those about to enter in this novel reverse pay-as-you-go.

\(^{61}\) The scheme allows to finance the future pensions of between 39 and 67,000 new entrants; see IMSS (2006, table VII.9). If IMSS only replaces retiring workers, this would imply between three to five years, given that the retirement rate will accelerate in the next few years from about 11 to 12-13,000 workers a year. If IMSS expanded its medical infrastructure (say, because of positive growth in formal employment), the scheme would exhaust sooner. Being a “reverse” pay-as-you-go, the scheme has the reverse properties of a traditional pay-as-you-go: the faster is the growth of new entrants, the shorter is the duration of the scheme.

\(^{62}\) This figure is not taken from IMSS official reports, but was calculated by the author as the value of 7% of the wages of the old generation of workers over the next 27 years.

\(^{63}\) Perhaps an outside observer would not be wide-off the mark if the notion of “financial triangulation” came to his mind.
VI. Discussion

Sections IV and V argued that the rents associated with the Afores and RJP reduce the benefits of social security to formal workers. It is one thing to save for retirement; it is another one to be forced to do so in an instrument that (so far) pays an annual real rate of return of less than 1%. Similarly, it is one thing to contribute to health insurance; and another one to do so through an institution that channels increasing amounts of contributions to a different purpose.

It is intuitive to use the framework of section III to establish a connection between the functioning of the Afores and IMSS health services and $\beta_f$, workers’ valuation of social security benefits. Clearly, Afore-SNTSS rents contribute to lower $\beta_f$ vis-à-vis a scenario where IMSS fully used its contributions to provide health services, and rates or return on Afores were competitive with alternatives for voluntary savings. There is a direct connection between these rents and lower aggregate labor productivity, reduced competitiveness and increased informality.

I reiterate that these are not the only reasons that produce these outcome, as $\beta_f$ reflects as well the valuation of other components of social security (housing, day-care services, and so on). Nor are they the only reasons why Afore accounts and IMSS health services may be undervalued by workers. But hopefully the evidence presented points out that the poor performance of Afores and IMSS results at least in part from the rent or power seeking behavior of the Afores and SNTSS.

This is not to say that the 1995 and 2004 reforms have been counter-productive. This is not the case. Mexico’s pay-as-you-go retirement pension system was unsustainable, and the pre-funded defined-contribution system is a better alternative. Equally, the RJP for new entrants is from the point of view of IMSS better than the previous one. There have been benefits from both reforms, and on balance it could be argued that the situation is better with than without them.

But the point is, nonetheless, that the context of low competition and regulatory problems in the “market for retirement savings”, and the by-passing of the 2004 reform to lower RJP costs, has allowed the Afores and SNTSS to capture, and continue to capture, important rents at the expense of all workers in Mexico. Further, these rents are an unnecessary feature of the objectives of
the 1995 and 2004 reforms. It is therefore of the essence to eliminate these rents as much and as soon as possible. In one case, through a careful review of the regulatory regime of the Afores, the nature of the “market for retirement savings” and the appropriate combination of competition-inducing and regulatory changes that can further reduce Afore commissions and increase real rates of return to workers on their forced savings. In the other case through a recognition that the “reverse” pay-as-you-go RJP scheme serves no other purpose than rent preservation for a few. The transitions towards Afore commissions that reflect marginal costs, and an IMSS-SNTSS labor contract that does not by-pass the Law needs to be accelerated. In the case of the Afores in particular, note that the rents already captured over the last nine years will inevitably translate into lower workers pensions. Even if tomorrow commissions dropped immediately to equal marginal costs, workers loss of future pensions cannot be undone. In the case of IMSS, note that there appears to be little sense in hiring new workers in a pension regime that is condemned to collapse in a few years. And in both cases it is important to keep in mind the central point: in the current strongly sub-optimal equilibrium, the pursuit of equity through the elimination of rents is also the pursuit of productivity and competitiveness.

It is critical to note that there is nothing illegal in the behavior of Afores or SNTSS. Both have acted within the Law. The problem is with the institutional structure, the design of the reforms, and the implementation of the reforms. The Afores are there to maximize profits. They face an extremely inelastic demand, a legally mandated supply of funds, and a market where “consumers” have substantive difficulties in valuing a product that they will consume many years from today and that they are obliged to purchase anyway. They also work in a context where information is difficult to understand. There is no surprise that price-cost margins will be very high, and that excess profits will be made. The fact that workers pensions will be low, and that there might be a fiscal contingency from guaranteed minimum pensions is not their problem. (And besides, if larger pensions are desired, they should increase the contribution rates.)

The SNTSS is there to maximize rents for its affiliates and for itself. It faces a quasi-monopoly situation in the provision of critical services, a firm that cannot go bankrupt and whose liabilities have an implicit government guarantee, a bargaining context where the firm is under little accountability, and

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64 Recall that the 2004 reform imposes a legal constraint on IMSS, not on SNTSS. Therefore, the issue of whether the 2005 labor contract is legal or not is not relevant to the SNTSS. With regards to the Afores, there is nothing illegal in excess rents (unless they arise from monopolistic trade practices).
a political context where, until recently, its role in supporting a political party was valued by a government from the same party. There is no surprise that benefits will be substantially larger than for other workers. The fact that IMSS is increasingly unable to deliver services is not its problem. (And besides, if better health services are desired, they should increase the contribution rates.)

It is extremely unlikely, contra-natura it could be said, that the Afores and SNTSS can internalize the negative equity and productivity effects of their behavior. That is not their role; that is somebody else’s role.

It is not that the government has not responded to the excess rents of the Afores. As mentioned, various legal reforms and administrative measures have been pursued to improve transparency, provide better information to workers, reduce barriers to entry for new Afores, and facilitate workers transfer from one Afore to the other. Nor is it that no attempts have been carried out to modify RJP, as the 2001 and 2004 reforms attest. It is that the effectiveness of these measures has fallen substantially short of what is needed, that some of them have been too slow in coming, and that large equity and productivity costs are being paid in the meantime. Why are not there larger pressures to reduce Afore commissions? Why are not there larger pressures to modify the IMSS-SNTSS labor contract?

I can suggest at least three reasons. The first is that the government has not pursued an unambiguous agenda to improve the functioning of social security and promote formal employment; in particular, budgetary resources have not flowed in this direction. The second, not independent of the first, is that social pressures to force the government to improve social security have so far not been, to say the least, overwhelming. As a result, third, mustering the political capital to face the complex technical, budgetary and political problems of the Afores and the SNTSS has not been essential. I suggest also that, mutatis mutandis, these three reasons also help to explain the behavior of Congress. And I suggest, finally, that behind these three reasons stands a fourth: the existence of an external source of rents, derived from oil, that sustains a difference between the underlying efficiency and productivity of the economy and workers’ standards of living, and that allows social protection programs to partly compensate for the deficiencies of social security without the need to raise taxes.

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65 See Madero and Mora (2006) for a good description of the measures taken.
VII. Social Protection as a Policy Response

Go back to graph 1 and consider point A, which is the equilibrium in the labor market when social security is fully valued ($\beta_f = 1$). Because even under the best of circumstances not all workers would have social security, over the years a number of social programs to provide health, housing, day care and, more recently, pensions, have been promoted by the government. These programs --labeled here social protection programs-- are different from social security in two relevant senses for this discussion. One, they are not bundled, with workers accessing one (say, a health program) without necessarily accessing another one (say, a housing program). And two, they are not paid with workers or firms contributions, but out of general revenues.

The important point here is that it is not the case that if workers are in the informal sector they lack social benefits; they have access to social protection programs which even if not of the same quality as those of social security, they are nonetheless unbundled and free. Let the costs per worker of these social protection programs be $T_i$, and the value given to them by workers $\beta_i T_i$, similar to the value $\beta_f T_f$ given by workers to social security benefits with costs $T_f$ discussed in section III. Note, critically, that neither self-employed workers or informal workers in non-salaried labor relation with firms (nor illegally hired salaried workers in the informal sector) pay for $T_i$, while $T_f$ is paid by workers and firms in the formal sector. So while it may be the case that $\beta_i T_i > \beta_f T_f$, so that workers prefer social security benefits to social protection benefits, it is also the case that $T_i$ is costly and $T_i$ is free.

Graph 3 depicts what happens to wages, labor productivity and the distribution of workers between the formal and the informal sector when social protection programs are introduced by the government. To link with the discussion of retirement pensions with the Afores and IMSS health services, I take as starting point the equilibrium with $\beta_f < 1$ discussed in graph 1.

In the absence of social protection programs, formal employment is $L_f'$, with formal firms at point C, informal firms at point G, and workers in the formal sector receiving wages plus social security benefits worth $(w_i' + \beta_f T_f)$, which from their point of view is equal to the benefits of only getting a wage $w_i'$ in the informal sector. As discussed, this situation is inefficient given the differences in labor productivity across workers (measured by the distance CG). Note that a total of $L_i'$ workers ($=L - L_f'$) are not receiving any social benefits.
Assume now that informal sector workers are offered social protection programs by the government which they value at $\beta_i T_i$. At points G and C workers in the formal sector would be receiving $(w_f' + \beta_f T_f)$, while workers in the informal $(w_i' + \beta_i T_i)$. But as inspection of graph 3 shows, this implies that formal workers would be worse off than informal workers, inducing the former to move to the informal sector. The analysis is now similar to that of graph 1. As the supply of labor to the formal sector falls wages there increase from $w_f'$ to $w_f''$. As a result, formal firms’ labor costs are higher and they reduce formal sector employment, which falls from $L_f'$ to $L_f''$. But the additional workers in the informal sector can only be employed there if there wages fall, which they do, from $w_i'$ to $w_i''$.

What is the effect of social protection programs on the three messages highlighted in section III? Consider first the impact on labor productivity. In the formal sector the productivity of workers is $(w_f'' + \beta_f T_f)$ as formal firms are at point K. In the informal sector the productivity of labor is just $w_i''$ as firms are at point M (recall that informal firms and workers do not pay for $T_i$). The result is that the productivity difference between formal and informal workers has widened (distance KM is greater than distance CG in graph 3). So the first
message is now this: social protection programs will generate productivity losses additional to the ones created by an undervalued social security system. The economy will be less competitive and in particular output and profits of formal firms will fall. The intuition is as follows: $\beta_f < 1$ acted as a tax on salaried employment in the formal sector; $\beta T_i$ acts like a subsidy to employment in the informal sector. If the policy response to a tax on formal employment is a subsidy to informal employment it is not surprising that informal employment increases more and aggregate labor productivity falls further.

Turning to message two shows a result that may be initially surprising but that is not really so. As inspection of graph 3 shows, with social protection programs informal and formal workers are better-off. Despite the fact that wages in the informal sector fall, they now receive benefits that they were not getting before; and because there are fewer formal sector workers, their wages increase. So it is the case that $(w_i'' + \beta_f T_f) = (w_i'' + \beta T_i) > (w_i' + \beta_f T_f) = w_i'$.

It is noteworthy that workers are better off despite that fact that they are less productive and the economy is less efficient. This happens because there are benefits that (apparently) nobody is paying for: the cost of social protection programs for informal workers. Of course, these programs must be paid for, but this is done from general tax revenues or from other sources; their costs are not internalized by workers and firms in the informal sector. As a result, incentives are modified in the direction of informality, particularly so as these benefits are “free” only under the condition of informality.

Consider finally message three. Informality now results from a legal design that excludes informal sector workers from social security; from a social security system that does not work well; and from a policy response to these factors through the use of social protection programs. Of course, there are many other reasons for informality, but among the factors that explain the distribution of Mexico’s labor force presented in table 1, the ones just mentioned are among them.

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66 It is also the case that evasion of social security, with illegal salaried labor adding to the size of the informal sector, is larger with social protection programs than without; see Levy (2006a).

67 These are associated with labor regulations in the formal sector that also open a wedge between firms’ costs and workers’ earnings and add to the tax on formal employment associated with an undervalued social security, as well as tax regulations. On the former see the general discussion presented in Heckman and Pages (2004) which can be interpreted as adding more elements to $T_i$. For a quantification for Mexico see Dávila (1994).
One last but critical observation for our purposes: if $\beta_f < 1$ is “compensated for” with $T_i > 0$, the undervaluation of social security need not translate in lower workers’ welfare, formal or informal. This despite the fact that labor productivity is stagnant or falling (particularly if $T_i$ increases as $\beta_f \to 0$). If, as suggested in sections IV and V, $\beta_f < 1$ partly as a result of the rent-seeking or power preserving behavior of the Afores and SNTSS, the resulting low productivity-high income concentration equilibrium may not be reflected in lower workers’ welfare if $T_i$ is increasing in parallel. And because the reforms necessary for $\beta_f \to 1$ may be politically very costly or complex, this low productivity-high income concentration equilibrium may persist; as long as the fiscal costs of $T_i$ can be paid for, somehow.

Graph 4 shows the evolution of government subsidies for social security and social protection programs since the start of the 1995 Social Security Law in 1997. Resources for social security refer only to subsidies for worker’s Afore accounts (the cuota social), and the subsidies for IMSS health insurance; they exclude government resources for pensions of the transition generation from the 1973 Law, as these are not part of benefits for workers that are currently in the labor market. Resources for social protection programs include various federal health and housing programs, principally and they exclude state resources for similar programs (there are no state level subsidies for social security). Similarly, other state level resources for pension programs, day care and the like are excluded. Therefore, the graph just reflects the appropriations approved by the Federal Congress over the last nine years and probably underestimates public resources for social protection programs.

Graph 5 shows total resources available for delivering health services to formal and informal workers (only in segment “A”). The first includes social security contributions by firms and workers and government subsidies for health services at IMSS after subtracting the costs of RJP paid by the health branch of IMSS. The second includes federal and state resources for various health programs operated by federal and state agencies; pension costs of non-IMSS public health workers are not paid from these budgets and are therefore not subtracted as with IMSS. The graph thus reflects the net available resources for delivering public health services to formal and informal workers.
Graph 4
Federal Subsidies for Social Security and Social Protection
(thousands of millions of 2006 pesos)

Source: Levy (2006b). Resources for 1997 are not shown as the Social Security Law started in the middle of that year; resources for 2006 are in accordance with the approved budget and may vary by the end of the year.

Graphs 4 and 5 depict yet another simple but powerful fact: federal subsidies for social protection programs have grown much faster than for social security, and since 2003 are larger in absolute terms; further, even including social security contributions, as of 2003 there are more resources to provide health services to workers in the informal sector than in the formal one. In parallel, it is important to note that over the period considered there has been no major increase in tax revenues (from income, consumption or other taxes): the share of non-oil revenues in GDP has been basically constant: it was 14.2% in 1998 and 14.8% in 2005. Revenues from oil rents, on the other hand, have increased: from 6% of GDP in 1998 to 8.8% in 2005. At the same time, the share of oil revenues allocated to public investment has fallen steadily, from 48% in 1998 to 32% in 2005 (Levy 2006b).
Many factors explain the evolution of these figures, but the ones mentioned above are among them. The important points for the purpose of this discussion are that there has been a rapid growth in social protection programs, and that this growth has not been financed by raising taxes on any group. The political costs to the government or to Congress of channeling fiscal resources for social protection programs have so far not been significant.

I end this section noting that social protection programs are no longer seen by the government as transitory feature of Mexico’s social policy while economic growth allows more workers to find a formal sector job with social security coverage. Benefits from some of these programs now have a legal status similar to social security entitlements, and their joint delivery, although not legally bundled as with social security, is pursued as an explicit policy goal.68

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68 In 2006 a Presidential Decree created the National Council for Social Protection with, among others, the following purpose: “To guarantee the observance of social protection policy, insuring the functional integration of benefits in health, housing and savings for retirement, among others, that the Federal Government offers to the population lacking social security coverage”. My translation of article 4 of the Decree published in the Diario Oficial de la Federación on February 27, 2006.
Social protection programs are considered permanent for all informal workers regardless of whether they are salaried or not, the Federal Labor law and the Social Security Law notwithstanding.

VIII. Voice and Exit in Mexico’s Social Security System

Hirschman’s (1970) study of the responses to the decline in firms, organizations and states provides a valuable framework to help understand the forces supporting the high inequality-low productivity equilibrium described in the previous sections. In his analysis “Voice” is the political reaction to the decline of a firm, an organization or a state, occurring through the established channels of Executive and Congressional action; through the active expression of opinions in the media and other forms of political action; or eventually through demonstrations, street protests and the like. In parallel, “Exit” is the economic reaction to the same phenomenon occurring through the discipline of market forces (say, when consumers cease to buy a firm’s product); or through the explicit abandonment of a geographic space (say, when workers migrate to another country). Depending on a country’s political institutions, cultural traditions and specific characteristics of the firm, organization or state, Voice and Exit interplay and determine outcomes in terms of when any of these entities has the incentives and ability to correct deficiencies, slack and poor performance generally; or when they fail to do so.

To clarify matters, take the example of public schools and assume educational quality is low. Voice occurs when parents express their dissatisfaction with the status quo and use their vote or other forms of political action to press the Executive and Congress to take corrective measures. Exit occurs when parents take their children out of public schools assuming private schools are available and, at least to some, affordable. If Voice prevails the performance of public schools improves; if Exit prevails bad quality will persist in public schools (and the voice of Voice dampened as those most able to exercise it --higher income families-- loose incentives to do so). The balance of Voice and Exit matters for the future of public schools. This balance will depend on the responses of the Executive and Congress, which in turn follow from the objectives of these two Powers, and the costs and benefits of taking a particular course of action (say, facing the teacher’s union if that is what causes low quality, or letting the public schools deteriorate while the more vociferous parents are subdued by their exit to private schools).
In this context, Mexico’s social security can be thought of as a complex organization or, better still, system, made up of a legal framework; a set of public agencies; an institutional framework characterized by the presence of two central political entities --the Executive and Congress--; a set of large and disperse private actors consisting of the firms and workers contributing to and affiliated with social security; and a small set of private and concentrated actors supplying labor or financial skills/assets necessary for the provision of social security services (among other inputs).

The performance of this system is central for Mexico from two equally important perspectives. On one hand, because as seen in section III if the system underperforms (in the sense of $\beta_f < 1$) aggregate output and productivity loses occur which lower everybody’s standard of living. On the other, because if the system underperforms there is a loss of welfare to the country’s workers resulting from poor health services and low retirement pensions, among other benefits.

In this paper I have argued that the underperformance of social security in Mexico partly derives from the rent or power seeking behavior of a few of the actors associated with the provision of social security services, namely the Afores and the SNTSS. As already mentioned their behavior is that expected of business and trade-unions, and the resulting income or power concentration and loss of aggregate productivity not their concern. The central question is therefore not about them, but about the institutional and incentive structure that allows their behavior to be reflected in the underperformance of Mexico’s social security system. Or, to put the question in Hirschman’s terms, why has the interplay of Voice and Exit produced such outcome?

For Voice to be effective there must be easily accessible information so that those affected by the underperformance of the system are aware about the phenomenon, and aware as well about the causes of the phenomenon. Differently put, there must be transparency. For Voice to be effective there must be a mechanism by which those affected can express their concern. Differently put, affected actors must be organized and represented. And for Voice to be effective, those that are its intended recipients must answer to those who express it. Differently put, there must be accountability.

Transparency, effective representation and accountability enhance Voice. It could be argued that Congress would not have initiated and voted the 2004 reform without the prior 2001 reform that made it officially aware of the
problems of RJP. It could also be argued that the recent changes in Afore commissions have reflected the exercise of Voice as CONSAR has responded to increasing concerns about these charges. Yet another exercise of Voice is the recent Federal Competition Commission opinion on competition conditions in the “market for retirement savings”. Voice has been present as a mechanism to correct the underperformance of Mexico’s social security, and while not fully effective, it has mattered.\(^{69}\)

But Exit has been present as well reflected perhaps most openly in the large proportion of workers and firms in informality. It is not that all informal employment is a response to a poorly functioning social security system. Some workers will always be informal given Mexico’s legal framework. These workers did not exit into informality; they were, so-to-speak, never allowed in as a result of a No-Entry legal constraint. But there are many more that legally should be in but have exercised the option of Exit into informality; most obviously the almost 8 million salaried workers illegally hired by firms without social security coverage.\(^{70}\) And the exercise of the Exit option has a mirror image in an equally significant number of firms that are also in illegality.\(^{71}\)

Voice has not always been there, but when it has the Executive and Congress have not ignored it completely. But the Executive and Congress have also facilitated and promoted Exit; nay, they have generously subsidized it. Because this is exactly the result of social protection programs that partly substitute for workers lack of social security benefits. And given that as a result

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\(^{69}\) An additional consideration may be that not all workers have the same need and potential to exercise Voice. Consider the simple dichotomy of section II between high (H) and low (L) wage workers. Assume high wage workers are more unionized and can force IMSS as members of its tripartite Board to channel resources preferably to improve services to these workers (as worker’s representation in IMSS Board is through large associations of unions). For these reasons, and because permanence in the formal sector is longer for higher wage workers, one could observe that \(1 \geq \beta^H_f > \beta^L_f \geq 0\) so that higher wage workers have less need to exercise Voice. This implies that the weight of the underperformance of social security falls on low wage workers (who may be relatively less unionized and be employed by smaller-sized firms, and then self-select into the informal sector). This, plus the higher probabilities of detecting larger size firms who avoid social security, would help explain why evasion and informality is concentrated in low wage workers, who are then trapped in low productivity jobs; see Levy (2006b). A similar situation could be told for firms, as not all firms can exercise Voice equally and firms’ representation in IMSS Board is mostly of medium and large size firms organized in formal employers associations.

\(^{70}\) Not all exit into informality is illegal. But when \(\beta_f < 1\) the level of self and non-salaried employment will be higher than the efficient one as firms and workers legally shift to activities not covered by social security; this is the difference between \(L^*_f\) and \(L'_f\) in graph 1 above.

\(^{71}\) The Economic Census reports over 2.5 million firms with salaried employment, while IMSS registries show only 800,000 firms; see Levy (2006b).
of the No-Entry constraint and massive Exit informal employment is over half of total employment, one can expect that Voice will be increasingly exercised by those in informal employment, demanding as well more and better social protection programs for themselves.

The interplay of Voice and Exit in response to $\beta_f < 1$ matters greatly for competitiveness and for workers’ welfare. Because social security and social protection are not the same. To reiterate just one important implication associated with pensions: in the first case workers are forced to save for retirement; in the second they are given the option to do so. And to reiterate, the productivity of workers with similar characteristics is not the same, nor are firms’ dynamics the same. And that is why the role of Voice to promote $\beta_f \to 1$ needs to be strengthened and the role of Exit into informality weakened. This will only occur, however, if incentives to the Executive and Congress, and firms and workers, change. And among many other measures required for this, two may play a critical role: one, forcing Congress and the Executive to internalize the costs of Exit. Two, facilitating to workers and firms, particularly low wage workers and small firms, the use of Voice and enhancing its effectiveness.

A discussion of these issues is beyond the scope of this paper. But mention needs to be made of the issue of oil rents. It is not the same to finance social protection programs from these rents, than from taxes on firms and workers; particularly if these taxes fall on formal firms and formal workers. To the extent that oil rents can be channeled to social protection programs the costs of Exit are not there, while the political costs of responding to Voice are very much there. Differently put, because the future costs of using oil rents are not fully internalized by the Executive and Congress today, Exit may dominate Voice. This is probably an important element supporting the current high inequality-low productivity equilibrium in which, with a few exceptions, everybody loses. Enhancing Voice so that $\beta_f \to 1$ and removing the No-Entry constraint --i.e., moving to a universal well-functioning social security system-- is fundamental for equity and efficiency. This is a tall order. But focusing attention on the problems of the Afores and RJP is a good place to start.

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72 And the fact that future generations of workers may bear part of the costs of not investing oil rents in growth-promoting public infrastructure may make the internalization issue more complex.
References


