The privatization of social services in Chile: an evaluation

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Abstract

We examine the privatization of Chilean social services that began in 1981. We conclude that the reform has had a positive impact by providing competition to public providers (health and education) and insulation from political capture (pension funds). The major lesson, however, is that the full benefits from privatization-cum-competition are slow to arrive and require able regulators to achieve them. Some of the benefits of competition are lost through rent dissipation, especially in the providers' search for the more attractive customers. These rents are due in part to the limitations of consumers when deciding on highly complex issues under asymmetric information. Another source of inefficiency is regulations introduced to avoid moral hazard problems, but which also have the effect of limiting competition. The performance of social service markets is improving, and this can be attributed to changes in regulation (fewer restrictions and more transparency), the consolidation of the industries, and hypothetically, better decisions on the part of consumers.

1. Introduction

This paper evaluates the privatization of social services undertaken in 1981 by the Chilean government.[1] A private pension fund system and a private health insurance system started to operate that year. The government also introduced a voucher system that does not discriminate between public and private schools, and established non-discriminatory rules for the entry of new institutions into tertiary education, which had been tightly restricted. In addition, in a bid for decentralization, local governments (municipalities) became responsible for the primary level of the public health care system as well as for public schooling. Our assessment of these reforms considers their original intent both to increase the efficiency of markets through liberalization and to increase the scope of freedom of choice. The government expected that competition between providers would ensure a more efficient supply of social services, while shifting decisions concerning social services to families would guarantee a better match between supply and family needs, as consumer preferences would shape the characteristics of supply instead of having bureaucrats deciding what is best for households.

As these are complex services, characterized by asymmetric information and knowledge is required to make the appropriate decisions, the State kept regulatory and supervisory powers, and did not rely on unregulated market forces. The government also restricted consumer sovereignty over decisions involving social services. Dependent workers are compelled to contribute 10% of their gross wage income to the privately administered pension fund of their choice, and must spend at least an additional 7% of wage income in purchasing a health insurance plan. The government subsidizes education directly, rather than providing cash-transfers to families.[2] The reasons for these restrictions can only be guessed at, as they were not made public. Moral hazard in decisions involving social services is one possible explanation. Senior citizens without pension plans or severely ill citizens without health plans would demand and probably receive State support. The self-control problems recently described by the behavioral economic literature can also explain why the government compels agents to save for retirement. (see Mullainathan and Thaler (2000)). Even when individuals realize their self-control problems, they could still undersave mandatory savings could be welfare enhancing (Diamond and Koszegi, 2002). Similarly, they could underinsure in health and underinvest in education. Externalities, at least in education and health, might also account for these restrictions on family sovereignty.

Furthermore there is the almost certain possibility that the decision-maker did not have complete confidence in the ability of families to decide correctly on complex issues that require specific knowledge. There are at least two limitations that consumers face when taking decisions: first, the limited availability of relevant information and, second, the difficulties in using it, even when it is

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[1] This was part of an all-encompassing privatization process. In the two years that followed the military coup that overthrew president Allende (1970 – 73), firms that were confiscated by the deposed government were restored to their owners. The banks and firms that the Allende's government had acquired, as well as a majority of firms that were state-owned before 1970, were either privatized or liquidated. Farms that had been expropriated since the agrarian reform of 1965 were privatized. The privatization wave continued after the return to democracy in 1990. The responsibility for building and operating most large infrastructure works such as highways, ports, and water reservoirs was gradually transferred to the private sector (see Fischer et al., 2003). Privatization in turn, was a building block of the country's shift towards a market economy.
[2] Primary education has been mandatory for primary school-age boys and girls since 1920, and in May 2003 secondary education also became compulsory.

available. Relevant information is costly and individual consumers might prefer to use proxies that they believe are related to the "unobservable" relevant characteristics of the services.[3]

The State provides minimum levels of information or forces social service providers to do so. It runs a national standardized test for primary and secondary students, which is useful as it enables comparisons between schools. However, whenever an indicator is used for comparisons (and hence for rewards), moral hazard theory indicates that service providers disregard excluded variables. Schools may concentrate on performing well on standardized tests, health plans might choose to have low coverage for rare illnesses not included in standard comparisons; and if information on pension fund is restricted to past rates of return and commissions and omits risk measures of portfolios, people will be unable to make rational decisions. Moreover, the collapse of the different dimensions of the service into a single indicator might reduce the incentives to innovate as any negative short run result might drive the provider out of the market.

Competition among private providers was expected to result both in lower prices and more varieties of products.[4] However, although individuals value the opportunity to choose, individual choice in social services is expensive. The administrative costs of private organization with competitive service suppliers are high because they lose the scale economies of a single compulsory system and they have additional costs from competition to attract customers (advertising, salespeople and the like).[5] Another reason why individual choice is more expensive is that identifying the more attractive customers is costly. Regulations or market conditions tend to limit price differentiation, and henceforth providers have incentives to spend resources (salespeople) in attracting clients whose fees on compulsory contributions exceed the costs of providing the service (Diamond and Valdés-Prieto, 1994). In a competitive setting, a provider that does not incur in these costs will lose its best customers. In short, providers compete, but the competition variables may not be those that the social planner had in mind when setting up the system.

The companies that manage Chilean pension fund receive a commission that consists mainly in a fraction of the affiliate's contribution to the fund. However, the cost of serving each client is the same, making higher income individual more attractive to AFP's. Similarly, the private health insurers attempt to attract clients with lower health risks and, unless forced to do so, do not renew contracts to those families with members that develop chronic or catastrophic illness. Schools, in turn, compete for better-endowed students and expel underachievers. Those schools that are able to attract more skilled students will perform better on national standardized tests. In turn, parents tend to prefer those schools that perform better on national tests; hence it is attractive for school owners to devote resources to attract skilled students.[6]

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[3] The notion that citizens use shortcuts to get the information they need to make appropriate choices is well documented by political scientists (Lupia and McCubbins, 1998, Lupia, 1992 and 1994, Iyengar, 1989).

[4] The effect of the ownership change is likely to be stronger when public bureaucrats had considerable scope to pursue their own agenda before privatization and the objectives of private providers of social services coincide with social objectives (Vickers and Yarrow, 1991). The latter condition requires competition and null or small externalities. Its effect is also likely to be higher if it facilitates the monitoring of managers, for instance if capital markets are efficient.

[5] Diamond (1999) argues that if government-organized pension accounts can be reasonably insulated from political interference, they dominate the privately organized individual pension accounts. However, the qualification about the ability to insulate the system from political interference is key to the analysis: while this may be true of the US, it is unlikely to hold for less developed countries.

[6] This has been called S-competition (Glennester, 1993), as opposed to E-competition based on efficient provision.

Under the setting of infrequent purchases of a service that is difficult for consumers to evaluate, brand name recognition becomes important. This implies that concentration and rents are likely in these markets if there are no scale diseconomies, as in the case of health insurance and pension fund management. The impact of market power is especially serious because demand for these services is less sensitive to price variation than in idealized competitive markets (Diamond, 1994). In education, the optimal number of students per establishment is low compared to total demand, so concentration is less likely.

The effort of private providers to attract "good" customers might result in segregated markets, a possibly undesired effect of individual choice in privately provided social services. In addition, segregation by suppliers might be reinforced by segregation by consumers. For instance, upper class or more educated parents might prefer schools attended by children of similar groups, as this is likely to improve their pupils' performance. Similarly in health insurance, consumers might prefer insurers with a low risk portfolio that cater to households with fewer health risks, as they are less likely to default. Moreover, social stratification might be reinforced in a world of imperfect information because poor and less educated households are likely to have fewer social networks, less information and lesser ability to use it (see various references in Schneider, 1999, p. 6-7, for school choice).[7] Hence policies that facilitate access to relevant information available and that train consumers on exercising choice are likely to improve market efficiency as well as reduce segregation.

The rest of this paper is organized as follows. Section 2 analyzes the pension fund system, while the third section studies the health insurance market. The next section deals with education, and the last section concludes.

2. The privatization of the pension system[8]

2.1 Description

In 1980 the government passed the law that created the private pension fund system, which began operating in July 1981. This new system introduced compulsory savings accounts for retirement. Dependent workers are required to pay 10% of their gross wages (with a maximum amount of 6 UF -around US$150/month) to the pension fund administrator (AFP) of their choice (the contribution is deducted from the personal income tax base).[9] They can add voluntary contributions in order to increase their savings, and these are also tax deductible. At retirement, workers can choose between a sequence of phased withdrawals from their individual account or use the fund to purchase an annuity with a fixed value in real terms. Workers contributing to the old system at the time of the reform were allowed to choose between remaining there and switching to the new system.[10]

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[7] The benefits from choice are not evenly distributed within society: "families that are better-off may be more likely to take advantage of school choice... because of better access to information, greater ability to afford transportation, a higher penchant to exercise educational alternatives, and greater generic experience with choice and alternatives (Levin, 1998, p. 379)".

[8] For a detailed account of the pension reform see Diamond and Valdés-Prieto (1994) and Acuña and Iglesias (2000).

[9] Independent workers can also save in the system, and this has same tax advantages.

[10] Most of them choose to switch as their pension contributions were reduced from 20% to about 15%.

Workers, in addition to the amount that goes into the pension funds, pay a commission that provides the AFPs' costs and profits and pays for survivors and disability insurance. In December 2002, commissions varied between 21.7% and 34.5 % of the contribution, depending on worker's contribution and the pricing policies of the AFP. Since the insurance premium represented about 9.5% of income, the net commission ranged from 12.2% to 25.0% of the contribution. Although AFPs are free to set their commissions, they have to charge the same commission rates to all affiliates independently of costs (including the insurance cost). AFP managers can charge a fixed amount in addition to a percentage of workers' contributions, allowing for some degree of differentiation between workers. The marginal cost of serving an additional worker is almost constant. Since the most of the income of the manager of the AFP is derived from the variable commission, the managers try to attract high-income workers.[11]

The State remains responsible for three aspects of social security. First, it regulates and supervises the AFPs and created a specialized supervisory agency (the Superintendencia de AFPs) for this duty. In this role its main task is to determine the types of instruments in which the funds can invest and to set limits to investment in these different instruments. Second, the State pays the pensions of workers that had retired on the old pay-as-you-go system, and also receives the contributions of the workers that chose to remain in the old pension system. Third, it pays the minimum pensions to those workers that contributed for at least twenty years to the pension system and whose funds in their individual account have been exhausted. Finally, it pays a minimum pension, based on need, to individuals over age sixty-five and the disabled over age eighteen. A new institution, the Instituto de Normalización Previsional (INP), was created to perform the latter tasks.

The change from a pay-as-you-go system to a fully funded, personal system represented a huge cost to the State during the transition, as it had to continue to pay the pensions under the old system as well as bonuses --recognition bonds that represented past contributions to the old system-- for workers who switched to the new system.[12] At the same time, the number of active contributors to the pay-as-you-go system fell by 70% as workers switched to the new system. The operational deficit of the pay-as-you-go system reached its maximum value of 8,1% of GDP in 1992, and has been falling ever since, reaching a value of 3,7% in 2001. The State financed the transition mainly by keeping large primary fiscal surpluses, which were achieved by reducing expenditures, including the pensions to beneficiaries of the old system,[13] and by increasing taxes. Other resources came from the sale of state owned enterprises and by increasing indebtedness, partly to the private pension system. For example, in November 1984, 43.3% of the assets administered by the AFPs were government debt. This percentage has been falling and by June 2003, only 29.1% of the funds administered by AFPs were invested in government debt.

Until the year 2000, AFPs were allowed to operate only a single fund. In that year, they were authorized to create a second fund conceived for workers close to retirement, since this fund could only invest in fixed income instruments. In August 2002, a regulatory change sanctioned three additional types of funds, with the object of increasing the options for affiliates. Each of the five funds has different maximum and minimum limits for their investments in variable income instruments, as shown in table 1. Men older than 55 and women older than 50 are excluded from

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[11] Some authors believe that this pricing strategy is the result of the authorities' pressure in order to avoid the regressive effects of a single fixed commission.

[12] As these bonds mature when the worker retires, the impact was diluted over time. The bonds pay an annual real interest rate of 4%.

[13] In 1979, the retirement age was set at 65 years across the board for male workers and at 60 years for female workers. Previously, male workers in some sectors could retire at age of 55 and female workers at age 50 and even younger.

fund A, while pensioners (who may still have funds in the system if they chose phased withdrawals), are excluded from funds A and B. Fund C is the continuation of the preexisting fund 1, while fund E corresponds to the old fund 2. Hence now workers have to choose type of fund and pension fund manager.

Table 1: Pension funds: Limits on variable income instruments and accumulated funds

Fund	Investment in shares and other variable income instruments			Accumulated funds (June 03)	
	Legal limits		Effective	MM$	
	Maximum	Minimum	April 2003		
A	80%	40%	75%	533,058	1.9%
B	60%	25%	41%	3,397,006	12.2%
C	40%	15%	26%	19,240,917	69.4%
D	20%	5%	17%	2,996,545	10.8%
E	0%	0%	0%	1,568,165	5.7%
Total				27,735,691	100.0%

Source: Superintendencia de AFPs

2.2 Evaluation of the private pension fund system.

This paper focuses on the impact the new pension system had on those agents that are directly involved in it: AFPs and workers. However, we start by briefly mentioning the effects of the reform on the economy as a whole. There is no question that the existence of AFPs, which are fairly sophisticated investors (buying public debt, bonds and shares, domestic as well as foreign) as compared to average workers or the State, gave a big impetus to the development of a local capital market. Moreover, their existence made it easier to privatize firms during the second half of the 80's, and their participation in the privatization process had the effect of distributing the property of these firms among workers.

Although it is often mentioned that the private pension system raised the Chilean savings rate, the evidence is not conclusive in this regard. Some authors, for instance, attribute the increase in the savings rate to the 1984-tax reform that reduced the income tax on retained earnings of firms to 10%. However, it is clear that the government's decision to reduce spending in order to help finance the transition to the new system did have a positive impact on the national savings rate. However, the reduction in public spending during the 80s meant less investment in infrastructure, health and education (see table 9 for spending in education), which had a long-lasting effect on the economy.

The owners of the pension funds administrators have benefited from high rates of return on assets, as can be seen in table 2. By the mid 90's, the AFPs became less profitable, but this is partly explained by rent dissipation, i.e., an increase in the competition between AFPs for clients. The salaries of salespersons represented 36% of operational costs of AFPs in 1997 (46% of operational costs if the life insurance premium is excluded). It was common for affiliates to receive a gift from the salesperson for switching AFPs, and as the economic returns from the different AFPs were similar, every month 5% of affiliates switched AFP.[14] In 1997, in an attempt to reduce the sales effort and hence lower commissions paid by affiliates, the government introduced rules that made it

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[14] Since pension funds are mandatory savings, these gifts were a means for defeating the system (Diamond and Valdés-Prieto, 1994).

more difficult to switch AFP. By the year 2000 salaries of salespersons represented a mere 14,9% of operational costs, and declined further to 12,9% in the year 2002.

Although affiliates benefited by the fall in net commissions, as can be seen in table 2, the major beneficiaries of the change were the AFPs, as the reduced efforts to attract affiliates led to an increase in their profitability (see Table 2). The government is attempting to reintroduce competition by opening the system to other financial institutions. In these last two years the profitability of AFPs has declined due to the increase in the premium of the survivors and disability insurance. This premium increased from 41,7% of AFPs' operational costs in year 2000 to 44,0 % in year 2002. This is probably due to aging in the affiliates of the new system and increased disability claims due to higher unemployment.

Table 2: Profitability of the funds administrators and of the funds

Year	Administrators %	Funds %
1985	17.9	13.4
1990	56.7	15.6
1995	21.7	-2.5
1997	17.5	4.7
1999	30.3	13.3
2000	50.2	4.4
2001	33.6	6.7
2002	26.5	3.0

Source: Superintendencia de AFPs

The biggest advantage for workers brought by the private system is that they have more security about the destiny of their pension contributions. Diamond (1994) believes that the Chilean privatized mandatory pension system appears to provide a high degree of insulation against political risks, as individual accounts are considered as private property, entitled to the same protection as other assets. In contrast, the old system was prone to political risk. During the first years of operations the old system collected funds in excess of withdrawals, as the ratio of pensioners to contributing workers was low. This led to a reduction in the requirements for entitlement to a pension and to the use of the funds to pay for other benefits or services. For instance, some pension funds provided 25-30 years mortgage loans to affiliates that paid a nominal rate of 5% when average inflation was close to 20 %. There is anecdotal evidence that political patronage and family links were the main criteria for assigning these loans. There also was the latent risk that the government could reduce pension benefits discretionary in order to finance a budget deficit as occurred in 1985, after the 1982 economic crisis.[15]

The old system was notorious by its lack of fairness. Fifty-two different pension systems for different industries and occupations, not only multiplied bureaucracies, but also led to highly uneven retirement benefits. Pension benefits depended on the ability to exert political pressure by the affiliates to a specific fund (Arellano, 1985). Even within one of these systems, there was

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[15]The system was also plagued by pension contribution evasion, as benefits were calculated considering the average contributions in the last three years before retirement and the total number of years of contribution. Salaries were underreported in the initial years and boosted in the last few years, increasing the government burden.

discretion in the amounts a worker could receive in pensions. Hence, it was not uncommon for two workers who had contributed similar amounts to receive vastly different pension receipts. Moreover, the system redistributed from the poor to the well to do. In fact, full indexation to wages was only granted to selected high-income workers and white-collar workers could retire younger than the blue-collar workers could. Moreover, blue-collar workers retired at the age of 65, while white-collar workers could receive pensions after 35 years of work. In the case of public sector employees, the requirement was only 30 years and 24 years of work for bank employees.

Table 3: Commissions of Private Social Security Administrators

Year	% of contributions to the fund				% of accumulated fund			
	Maximum		Minimum		Mandatory contribution		Voluntary savings	
	Gross	Net*	Gross	Net*	Gross	Net*	Max.	Min
1985	63.8	38.6	41.7	16.5	11.6	9.1		
1990	62.3	52.0	31.9	21.6	4.2	2.4		
1995	42.6	34.8	28.4	20.6	1.9	1.2		
1997	46.4	40.0	27.3	20.9				
2000	36.6	30.2	22.5	16.1	1.5	1.0		
2001	33.8	27.2	21.7	15.1	–	–		
2002	34.5	25.0	21.7	12.2	1,2	0.8	0.64	0.47

Source: Superintendencia de AFP.
Notes: *: Excludes the life insurance premium, estimated as 2.52% of gross income for 1985, and 1.03%, 0.78%, 0.63%, 0.64%, 0.67%, and 0.95% for the years 1990, 1995, 2000, 2001, and 2002 respectively.

It has been known for a long time that the private pension fund system is costly.[16] Workers pay commissions (excluding the survivors and disability insurance premium) that in March 1985 varied between 31.4% and 53.6% of the pension contribution, depending on the income of the worker and the specific AFP. By December 2002, commissions had fallen to between 12.2% and 25.0% of the worker's pension contribution (see table 3). These numbers are high when compared to the administrative costs of the Chilean public pension fund, which represented 1.4% of the budget of the system and 7% of worker's contributions in the year 2000.[17] Part of the reason is that the INP does not invest. Also the AFPs have a percentage of retired people that does contribute to the fund. The AFPs average annual charges was 9.1% of the accumulated fund in 1984, an amount that had fallen to 0.8% by the year 2002. These numbers show that the system is becoming less expensive for workers, partly due to scale economies, and are probably lower than comparable private fund schemes in developed countries.[18]

Diamond (1994) believes that what is at issue is the administrative efficiency of the private market, not particular features of the Chilean system. He claims that the cost per person is not far from the costs observed in other privately managed pension systems, which are usually higher than administrative costs in well-run unified government-managed systems. Note, however, that commission charges have fallen substantially since 1994, and could fall even further in the future.

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[16] Diamond (1994) finds that the most surprising aspect of the Chilean reform is the high cost of running the privatized social security system, since it was higher than the "inefficient" system that it replaced.
[17] In the 60s and 70s around 8 % of contributions were spent in administration, excluding the cost of capital (Diamond and Valdés-Prieto, 1994)
[18] Chilean pension funds depend on mandatory and not voluntary savings, which should make them less expensive.

In particular, AFPs charge annual commissions of only 0,47% to 0,64% of the accumulated funds in the case of voluntary savings (in the case of affiliates, the highest commission is 0,51%). A possible explanation for this difference is that competition for voluntary savings is stronger, as other kinds of financial institutions participate in this market, while there are rents in the pension fund industry. For various reasons, it seems that there are barriers to entry into the pension fund market, which has become more concentrated over time (the three main AFPs concentrate 78% of all affiliates).[19]

In spite of the high cost of the system, affiliates have benefited from high effective rates of return on their savings. For the period between July 1981 and April 2003 the average effective return was 6.9% for an individual with a monthly wage of 111.200 pesos of April 2003, and 7.2% for an individual earning the top rate for compulsory contributions ($1.017.812).[20] These high effective rates are due to the extraordinary performance of pension funds. On average, since inception in July 1981 up to April 2003, the average real return on pension funds has been 10.3%. The high rate of returns exhibited by pension funds reflects high returns to capital in the Chilean economy in general (Diamond and Valdés-Prieto, 1994), which are partially explained by the huge increase in the value of equities in the early 90's. Rates of returns have been lower in recent years. From May 1997 to April 2003, the average return on pension funds fell to 5,3%, while the average effective return for affiliates was 4.3% for the lowest income workers and 4.4% for those with salaries of 60UF.

An oft-touted advantage of the AFP system is that it allows for freedom of choice among administrators. However, workers did not have much actual choice as fund managers chose portfolios that were quite similar, which in turn translated into similar performances. For a low-income worker, the effective rate of return for the period between July 1981 and April 2003 varied from 6.42% to 7.36%, that is, by less than one percentage point. Diamond and Valdés-Prieto (1994) believe that affiliates seem to choose among AFPs according to the ranking of past returns, and that the public seems to be unaware of the trade-off between risk and return. Moreover, the Superintendence does not report the standard deviation of past returns. It appears from table 4 that affiliates chose the AFP that charges the lowest commission. The two AFPs with the lowest commissions are the ones with the largest number of affiliates, while the most expensive ones are the smallest. An alternative explanation is that the larger AFPs can afford to charge lower commissions because of scale economies. There are other explanations, and without a more detailed analysis, it is difficult to choose among competing hypothesis.

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[19] Potential entrants have to incur in the cost of capturing affiliates from existing AFPs. Moreover, they have no information on which are the most attractive clients, and hence are likely to end with a less profitable portfolio of affiliates.
[20] The effective rate of return of workers' contribution is computed by subtracting the commission net of the insurance premium from the return on the funds.

Table 4: AFPs market participation and performance

AFP	Affiliates	Commissions July 2003	Returns May 2000- April 2003 (%)		Returns May 2002- April 2003 (%)	
		%	Fund	Net*	Fund	Net*
Cuprum	312,122	24.90	5.07	4.19	2.74	2.01
Habitat	811,280	24.01	5.80	4.95	4.16	3.43
Magister	66,002	28.22	5.83	4.73	4.45	3.53
Planvital	97,931	29.44	5.68	4.58	3.76	2.80
Provida	1,454,441	24.03	5.31	4.46	3.20	2.47
Suma-Ban	431,823	25.64	5.54	4.59	3.52	2.72
Sta. María	283,488	26.02	5.48	4.54	3.48	2.67
System	3,457,087		5.46	4.57	3.48	2.72

Source: Superintendencia de AFPs
* Corresponds to an affiliate with an income of Ch $254,100 in April 2003.

Given that the AFP's were highly constrained in the types and the amounts of instruments they could invest, it is difficult to judge their investment performance. Moreover, since the law sets penalties for AFP's whose fund returns fall by more than 2% below the average of the industry, while there is no compensating benefit when the returns are higher than average (except for marketing possibilities), the AFP's tend to invest with herd-like behavior. This explains the fact that the returns of all AFPs funds show very little dispersion. The average annual returns vary from 10.1% to 10.6% since inception. The limits on investment have been relaxed gradually and hopefully the ability to invest well will become more important in the future. The multi-fund system will produce more diversity, and probably was one of the reasons to introduce it.

Table 5 shows that the profitability of the new funds can vary substantially. When the recent reform was introduced, affiliates could choose among the five funds that each AFP was allowed to administer. If they did not exercise their choice, they were assigned into funds according to a default scheme that depended on the age of the affiliate. The second column in Table 5 shows the distribution of affiliates if they had all been assigned by default. However, before the new funds started operating, 35% of affiliates, including both active and retired workers exercised their option to choose something different from their default allocation. The third column in the table shows the choices of affiliates who exercised their choice and the fourth column shows the distribution of affiliates by fund in April 2003. This seems to indicate that affiliates are willing to make choices when more is at stake.

Table 5: Distribution of affiliates by fund type

Type of fund	Initial allocation (%)	Election* (%)	April 2003	Fund returns (%)**
A		7	2.2	5.3
B	53	19.6	41.2	3.1
C	42	55.1	45.7	2.4
D	5	8.4	7.7	2.1
E		9.9	3.1	0.9

Source: Superintendencia de AFPs and Asociación de AFPs
* Corresponds to 35% of contributors.
**From the beginning of the multifund system (27 Sept. 2002 -30 April 2003)

A further problem with the system concerns the options at retirement. There are severe restrictions on how the fund can be disposed, the main choice being an annuity lasting for the life of the pensioner (plus a smaller fraction to a widow), or a system by which the pensioner receives a set annual fraction of the remaining funds (which can still earn returns). The second option represents no additional costs for the retired workers, but the first option, chosen by most pensioners as it eliminates investment risk, could be very expensive, at times reaching more than 5% of total funds.[21] These high commissions led to intense sales efforts, which led to higher costs. The government has introduced legislation that promises to provide better information on the costs of these annuities to retiring workers and this has led to a decline in the commissions, which have fallen by almost half.

3. The health insurance system[22]

3.1 Description

A second innovation, introduced in 1981, was the partial privatization of the health insurance system. The military government introduced a law-decree that created the private health insurance firms, known as Isapres. All active and retired workers must contribute a fraction of their earnings to a health insurance system. At present, the compulsory contribution corresponds to 7% of a worker's salary, with a maximum of 4.2 UF (i.e. corresponding to a salary of 60UF or Ch$975.000).[23] Workers can choose between one of the 15 open private health insurance companies (Isapres) or the public health insurance system (Fonasa).[24] Currently, the private system covers about 18% of the population, while Fonasa covers almost 70% and armed force health systems and the private sector cover most of the rest of the population. Before 1981, all workers had to contribute compulsorily to Fonasa even when they did not use its services.[25] People that are self-employed can also pay into either system (Isapres or Fonasa) and they represent 5% of affiliates to Isapres (Superintendencia de Isapres, Estadísticas de cartera, March 2003).

Fonasa provides (virtually) the same benefits to all affiliates, independently of their contributions and of the number of dependants of the affiliate. The affiliates can choose between two different forms of health provision: free choice or institutional. Under free choice, the affiliate and its dependents can select a private health provider (which has a contract with Fonasa that specifies rates), while paying a co-payment. In the institutional mode, co-payments are lower and related to the beneficiary's income (the co-payment is zero for low-income individuals), but beneficiaries get health under the public system without choice. Since Fonasa serves the destitute, as well as providing public goods (vaccination programs and health campaigns, etc.), it receives 54% of its funding from the State (Data from Fonasa for 2001). Fonasa also finances the primary health clinics, which have been under the supervision of the municipalities since 1981.

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[21] Part of the commission was used to illegally provide cash to the pensioners. Note however that better information makes it easier to engage in collusive practices, since deviations from a collusive agreement are easily detected.

[22] A complete, though slightly dated analysis of the Isapre system can be found in Fischer and Serra (1996).

[23] Initially, the compulsory contribution was 4% of the worker's salary. There was no clear reason why this fraction was changed in the mid 80's.

[24] There are 8 closed isapres linked to firms, which only serve company workers. They represent 4.4% of covered workers. These isapres receive contributions from the firms they serve which represent 31.7% of their income.

[25] High-income workers did not use the public system due to their low quality or long waiting times. For them the contributions to Fonasa were an additional pay-roll tax.

Table 6: The private health insurance system

Year	Beneficiaries		Isapres				Exp. per benef.[2]	
	Number	% of pop.	Admin. costs	Profit rate[1]	Profit/ Sales	Health Medical Visits	Thousands of Dec. 2000 Ch$	
							Isapres	Fonasa
1985	545,587	4.5	29.0	39.9	6.01	8.36	118.9	–
1990	2,108,308	16.0	21.4	26.8	7.67	9.04	104.9	37.6
1995	3,763,649	26.5	20.0	23.1	4.83	9.41	147.4	88.3
1997	3,882,572	26.6	19.0	15.3	3.00	10.18	162.7	103.6
2000	3,092,195	20.3	17.5	9.2	1.82	13.12	212.5	118.3[3]
2002	2,828,228	18.7	14.6	18.0	1.40	14.00[4]	197.4	--

Notes: [1]. Profits over equity. [2]. Excludes the subsidy of medically certified absence from work. Co-payments included, using data for the year 2000. The expenditure in the Program for Complementary food is excluded from Fonasa. [3]. Corresponds to 1999. [4]. Provisional number for 2001.
Source: Series Estadísticas, Superintendencia de Isapres. Rodríguez and Tokman (2000).

The private system is run on a totally different basis: the affiliate signs an annual contract with an Isapre that specifies the benefits she will receive, and which depend on her contribution, age, sex, the number of dependants and their age, sex, etc.[26] Affiliates can improve their plan by paying additional, voluntary contributions. In May 2003, voluntary contributions represented 32,3% of compulsory contributions. The clients of Isapres must use private health providers. To obtain the benefits they can buy a voucher before going to a doctor that has a contract with the Isapre (which specifies medical rates). The cost of the voucher is the client's copayment. Alternatively, they can choose any doctor and then get a reimbursement from the Isapre. In general, the reimbursement does not cover the full cost of the visit, so there is an implicit copayment. The amount of the co-payment or reimbursement depends on the specific plan that the affiliate has contracted with the Isapre. On average, Isapres pay 68% of medical costs, the remainder being a copayment by affiliates (Superintendencia de Isapres, Prestaciones June 2002).

The system also allows for collective plans in which the Isapre establishes a contract with a substantial number of workers in the company. Until year 2000 Employers were allowed to deduct from their corporate income tax their contributions to these collective plans that did not exceed 2% of their employees' salaries. This subsidy was eliminated that year with a phasing out period. The reduction in adverse selection and other expenses implies that the individual price of a plan can be far lower than when plans are contracted individually, making collective plans highly attractive for workers.

The private system is too expensive for most individuals. The average beneficiary of the private system is employed, has a middle or high income and has a low health risk. The compulsory contribution of 7% of income is not sufficient to buy into a good plan for lower income individuals or for potential affiliates with high health risks. In these cases, the voluntary contribution in order to get a suitable program would be too expensive. For example, only 8.4% of affiliates to Isapres

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[26] While Isapres cannot charge differently depending on the health related risks, they are not required to accept all applicants. In practice, this means, first that an applicant that suffers from a chronic condition (i.e., a condition that increases her expected health costs) will not be accepted by an Isapre, but on the other hand her contract cannot be rescinded. The implication is that individuals who develop chronic conditions become *captive* in their original Isapres and cannot switch, unless it is to go to Fonasa, which accepts all comers.

were older than 60 years old in March 2003,[27] which is somewhat lower than their presence in the population (11,4% according to the 2002 census), but an improvement over the 4% of 1990.[28] The proportion of beneficiaries is much smaller and corresponds to only 5.3% off all beneficiaries of the private system (explained by fewer dependents among older people). The rate of affiliation to Isapres among the older than 60 years is 8.9% (Casen 2000. The Casen survey of the year 2000 showed that only 3.1% of the members of the lowest income quintile are beneficiaries of Isapres (while 54.2% of the households in the highest income quintile was a beneficiary).

The number of beneficiaries of the Isapre system grew every year until 1997, when it came to represent 26.5% of the population. Since then, the percentage of the population that is a beneficiary of the system has been decreasing slowly, until it reached 18.7% of the population in 2002. There are several reasons for the decrease in the number of beneficiaries: i) the increase in the unemployment rate since 1998, ii) increased funding for Fonasa that made this system relatively more attractive (expenditure per affiliate increased by 300% in the 1990s), iii) the removal in the year 2000 of the tax incentive for the corporate contribution to collective plans of their employees, iv) a tendency to the elimination of collective plans that were less expensive for employees, partly explained by the elimination of the tax incentive, (v) better supervision by Fonasa to bar Isapre affiliates from getting free services (as indigents) from the public system, and vi) and the increase in the costs of the Isapre plans.

There has been a general increase in the cost of the medical services, both publicly and privately provided, as shown in Table 7, due to an increase in both the number of health visits by beneficiary and in the cost of these visits. Rodríguez and Tokman (2000) have constructed a quantitative index of health procedures.[29] These authors have estimated that this index increased by 104% in the period 1990-1999 in the Isapre system, while total cost (excluding the subsidy for medical absences from work) increased by 165%, showing that there has been an increase in the unit costs of medical services of about 30%.[30] A large fraction of the increase in unit costs is due to newer and more sophisticated medical treatments and a better quality of service. The stricter regulation of Isapres has also contributed to their costs and hence to the higher cost of their plans. The 1990 law forced Isapres to renew contracts to expensive affiliates, second, by increasing the minimum required coverage and in general by closer supervision of the system.[31] Voluntary contributions for health plans increased from 26% of compulsory contributions in year 2000 to 32,3% in year 2003 (Superintendencia de Isapres, Estadísticas básicas, May 2003). This change is explained by the increase in health costs but perhaps also by the desertion of lower-income workers, who are less prone to make voluntary contributions.

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[27] Casen is a nationally representative socioeconomic survey.

[28] Superintendencia de Isapres, Cartera 2003. Note that initially the Isapre system did not affiliate people with health problems. This explains the low proportion of the aged population at inception. At present, the only age group that is increasing in absolute numbers in that age group.

[29] They use the tariff Fonasa pays for medical services in the free choice system to construct the index.

[30] Unit costs increased by 141% in the public sector (institutional) in the same period. Total expenditure in Fonasa increased by 290% in 1990-1999, while the index of health procedures increased by only 22%.

[31] Some measures have increased administrative cost while not providing many benefits to affiliates, as in the case of elaborate accounting system developed to track small excess contributions. These excess contributions occurred because for some workers with variable income, their plans based on 7% of their income did not reflect increases in monthly income.

3.2   Evaluation

The Isapre system was, until the late 90's, a very profitable system. Up to 1995, the profit rate had been gradually falling from the 39.9% profit rate on equity of 1985 to the 30% of 1995. In recent years the profitability of the system has been much more variable, as new regulations have increased costs. In 1999, for instance, the profit rate of the system was 2.2%, bouncing back to 18.0% in the year 2002 as ISAPRES were able to raise rates (at the cost of a reduction in the number of affiliates) as shown in Table 6. Nevertheless, the margins are becoming thinner: whereas the profit to sales ratio was almost 8% in 1990, it had fallen to 1.4% by 2002.

Contrary to the AFP market, the private health insurance market had remained relatively unconcentrated, though this seems to be changing. The largest Isapre has around 25% of all beneficiaries, and there are three others large Isapres. For a number of years, the Herfindahl index hovered around 1500, but recent events have increased this value to almost 2000, and it is set to become even more concentrated in the future as margins decrease and the risk reducing effects of having a larger mass of clients becomes more important.

It is clear that the system has been beneficial to higher income families, since, under the previous system, their contributions were just another form of taxation, as they did not use the public system. An overall welfare assessment is difficult, since the public health system lost the compulsory contributions of these same households. The expense per beneficiary in the Isapre system is almost sixty percent higher than in the public system, even though this difference has decreased over time. This comparison underestimates the cost of the private health system, because it omits the direct payments of Isapre affiliates for the part of their treatment that is not covered by their plan, which represents 33% of total expenditure.[32] Notice, however, that the number of health visits does not differ substantially between the two systems, except in the case of surgery, as shown in table 7.

A cursory analysis might suggest that the public system is more efficient. The problem with that interpretation is that there is a significant difference in the quality of care in the two systems.[33] Some economic principles suggest that private, individual health care insurance with free choice of services and providers is more expensive than public insurance without free choice. First, because there is a tendency to overprovide services: the classical example is the fact that 63.4% of all pregnancies in the private sector end in a caesarian section, while the average for the public sector with no free choice is about half that rate.[34] Second, the administrative cost of individual insurance contracts is higher, among other things, because Isapres evaluate the health risks of each new affiliate and must ensure that the level of reimbursement and the coverage are appropriate for their particular plans.[35] In the year 2002, the administrative and marketing expense were 14.6% of total revenues, while the profit rate was 6.9%. The administrative expense in Fonasa is only 1.5% of total expense. Third, a centralized system may be able to contract services at monopsony prices. On the other hand, another set of economic principles indicates that public systems are less efficient due to lack of competition. Public hospitals financed by Fonasa are probably less efficient than the private

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[32] The data on expenditure in public health does not include the transfers from municipalities to the primary health care centers, but these are relatively small amounts.

[33] The aggregates figures in table 7 may also hide differences in the composition of services.

[34] Interestingly enough, in the section of the public sector with free choice, the caesarean section rate is the same as in the private sector. This suggests that it is free choice rather than whether the system is private or public that leads to overprovision.

[35] The Isapres must also ensure against fraud, which occurs when affiliates lend their personal identification cards to non-beneficiaries.

clinics that provide services for Isapres. There are no serious estimates of the extent of these inefficiencies, but anecdotal evidence suggests that they might be large.

Table 7: Health services provision per beneficiary, 2000

Type of service	Fonasa	Isapres	Difference (%)
Doctor visits	3.65	3.80	4.1
Lab. Exams	4.56	4.12	-10.0
Surgery	0.08	0.11	37.5
Expenditure per beneficiary*	87,339	137,525	57.1%

Sources: Estadísticas Fonasa, Series Estadísticas, Superintendencia de Isapres, and authors' calculations. Does not include copayments by Isapre patients. Does not include medical licenses.
*: CH$ of 2000.

One of the main problems of the Isapre system was that plans offered good coverage for routine health care, but poor coverage of catastrophic illness, which is the main object of compulsory health insurance. Strong criticism on this basis forced the Isapres to introduce catastrophic illness insurance. The catastrophic illness insurance operates via a system that covers all expenses after a specified yearly expenditure by the beneficiary. The system does not allow free choice and works like a "managed care" system for these patients. Preliminary evidence seems to show that this approach works, see Table 8, but there is little experience with the system, which has only operated for a few years.[36]

In any case, it is interesting to speculate as to the reasons why clients would choose plans that lack good coverage for catastrophic illness. One explanation is that affiliates are myopic and do not evaluate the cost of illnesses (alternatively the probability) that are rare though costly. Second, affiliates may be able to switch to the public system if they require cover for an illness that has little coverage under their private plan. Third, the system is not transparent, since plans will claim to pay up to up to X% of a standard defined by the Isapre that is not publicly available for a given treatment. In any case, the situation improved with the introduction of catastrophic insurance in the Isapre system.

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[36] A statement of 8/8/03, the Superintendent stated the catastrophic illness system was working satisfactorily, and is presently being used by more than 4.000 patients (84% of Isapre affiliates buy this insurance). The catastrophic insurance financed a large share of complex transplants in year 2001 (heart: seven out of ten; lungs: three out of nine; kidney and pancreas: three out of three, and liver: eight out of 34.

Table 8: Cases and categories covered by catastrophic insurance by August 2003

Diagnostic or affected system	Total	Distribution
Tumors	3,438	41.5
Circulatory system	1,583	19.1
Congenital malformations	378	4.6
Digestive system	375	4.5
Genitourinal system	373	4.5
Trauma and poisoning	361	4.4
Osteomuscular system	320	3.9
Respiratory system	278	3.4
Nervous system	221	2.7
Other	1,110	13.2
	8,437	100

Source: Superintendencia de Isapres, Archivo
Maestro CAEC.

Another problem is that Isapres try to exclude beneficiaries who develop expensive illnesses. In an attempt to end this problem, since 1991 the Isapres are required to renew their contracts to any affiliate who desires renewal. However, the Isapres found a way around this obligation by raising the price of these plans and offering new plans with similar benefits but at the original price to affiliates that do not represent a high risk. The Superintendencia that supervises Isapres has instituted rules that try to reduce this type of risk selection, by limiting the yearly raises in plans. However, it runs into the inherent instability of the private health insurance system. Since low cost affiliates in a given plan are attractive to other Isapres, there is a tendency to attract them to a plan with similar characteristics (in another Isapre) but without the expensive individuals. Even if this last problem might be solved, affiliates that (or whose dependants) acquire an expensive illness are unable to switch between Isapres, thus losing one of the main advantages of the system: the freedom of choice between Isapres.[37]

Critics of the system complain that Isapres charge different rates depending on age and sex. The reason for differentiated charging is that health costs are related to age and sex. However, for a young healthy single agent, his 7% contribution should be higher than her health costs, so she is a profitable affiliate and the Isapres will compete for her by offering her unneeded health services.[38] This type of inefficient rent dissipation replicates the phenomenon that occurs in AFPs, and is caused by the compulsory contribution. Later on, when these same clients grow old, their fees grow and they may have to switch to plans with lower coverage, just when they start needing them. Hence there are strong pressures to change to a system in which at least a minimum level of health insurance can be bought at a fixed price independently of age, sex and health status, financed via a compensation fund.

Most of these problems arise from the serious information asymmetries in private health systems (see Fischer and Serra (1996)). There are ways of reducing these problems, but they are intrinsic to

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[37] This becomes particularly clear when an Isapre goes bankrupt. Afiliates with low health risks can switch to alternative Isapres, but those with high risks have to move to Fonasa. In that case, Fonasa serves as an insurance system for clients of failed Isapres. It has been claimed that the alternative policy of randomly allotting bad health risks among Isapres would aggravate moral hazard problems in the Isapre system.

[38] This is even more so for men, since they do not have the risk and associated expense of pregancy.

private health insurance systems so they cannot be eliminated from a system, which simultaneously has free choice of providers and asymmetric information.

3.3 Recent developments

In order to solve some of the problems caused by having two health systems operating under completely different approaches (socialized and free market), the government is promoting a series of reforms. The most important change is the proposed creation of a plan (AUGE) that covers the major causes of health problems. The plan would be compulsory to all citizens at a common price, without discrimination by age or sex. Those agents whose health contributions are too small to buy the plan would receive a subsidy. Isapres would have to furnish plans that are at least equivalent to the AUGE plan. The differences in costs due to age, sex or health status would be averaged out though a compensation fund which would receive from or pay to Fonasa or the Isapres according to the relation between the average cost of the plan for their mix of clients in relation to the average mix in the population.

Under this plan, the major health problems would receive defined treatments in a timely fashion (the timetable for treatment is part of the contract). In contrast to the present situation, where in the public system the affiliates are theoretically offered treatment for all ailments but in practice they are rationed because of limited resources, under the AUGE plan, the specified treatments are guaranteed and timely. For the private system, the fact that AUGE covers the main health problems and the fact that it becomes part of all contracts reduces the problems caused by agents that buy inappropriate health insurance due to myopic analysis or because they think of switching to the public system if they develop a serious disease.

A further development is the proposal for franchised hospitals. Under this scheme, private agents would build hospitals and they would receive payment either from a capitation scheme (which has the possibility of offering bad treatment) or perhaps better from a scheme in which they get paid a fixed amount for a specific diagnosis or treatment. Thus, agents would have the choice of switching to other hospitals if they received bad service.

4. Public education and school vouchers

4.1 The reform

The purpose of the educational reform was to improve the quality of the state-financed primary and secondary education. Its three main elements were i) the shift of public resources from tertiary to primary and secondary education, ii) the transfer of state-owned schools to local municipalities, and iii) the establishment of a non-discriminatory subsidy (an implicit voucher) per enrolled student both at public and private schools.[39] Policy makers believed that the state financed education could be improved by having education providers compete for students, as transfers to institutions would depend on the number of students attending classes, and having parents deciding for their children education. One consequence of this reform would be a more diverse educational offer reflecting the heterogeneous preferences and needs of families. Policy makers believed that choice itself was a positive good, above and beyond the effects on school and student performance. The government's

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[39] There were preexisting free private schools associated to religious congregations or to philanthropic organizations. These schools received a state subsidy equivalent to 50% of the expenditure per student in the public system, a percentage that was raised to 90,4% in 1978.

strategy was based on the premise that competition for students among educational establishments would be based on academic quality, which in turn assumed parent involvement in children's education and the capability of evaluating alternative educational offers.[40]

Non-discriminatory transfer rules were established to insulate the system from the influence of particular interest groups.[41] Vouchers differ according to the cost of providing education. For normal schools functioning on the basis of a full day shift, the value of the monthly voucher is US$40,6 for primary schools and US$48,2 for secondary non-vocational education. If the school does not operate on a full day shift, these figures drop to US$29,6 and US$35,8, respectively. Subsidies for vocational secondary schools are higher because classes are smaller and require more equipment. So does differential education (for children with learning disabilities), which has a voucher worth US$97.7.[42] Schools located in rural areas receive an additional per-capita subsidy that decreases with the number of students, as scale economies become less important.[43] Although it has been recognized that poorer students as well as underprivileged students are costlier to educate, the voucher system does not differentiate based on these dimensions.

Table 9: Budget of the Education Ministry
(Millions of Ch$ of 2001)

Year	Total	School Subsidies [a]		Other transfers		Tertiary education	
		Amount	%	Amount	%	Amount	%
1980	680,841	49,437	7.3	2,674	0.4	255,025	37.5
1981	765,819	184,258	24.1	4,334	0.6	187,619	24.5
1985	690,899	312,322	45.2	85,552	12.4	190,563	27.6
1990	556,474	355,070	63.8	49,603	8.9	98,110	17.6
1994	831,749	501,751	60.3	108,130	13.0	145,524	17.5
2000	1,570,038	988,769	63.0	292,568	18.6	191,085	12.2
2001	1,687,861	1,080,992	64.0	301,055	17.8	200,313	11.9

Source: Compendio de Información Estadística, Ministerio de Educación.
Note: [a] Excludes capital transfers, transfers in kind and especial programs.

The country has gone a long way to decentralize the finances of the publicly funded education system and to shift resources from tertiary education to secondary and primary education. In 1980, just before the policy reform, the Education Ministry spent 54,8% of its budget directly and transferred 37,5% to higher education institutions. In the year 2.001 these figures were 6,3% and

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[40] There is evidence that parental choice of schools is influenced by variables unrelated to academic excellence, such as closeness, sports facilities, values and other characteristics, which might be appropriate (various references in Elacqua and González, 2003). However, preferences may also include less acceptable variables such as racial and social background of peers.

[41] For instance, before the reform a few elite public schools, attended preferentially by upper income groups, received a disproportionate share of the budget.

[42] Differential education requires smaller class size and specialized non-teaching staff. Schools that include handicapped students in regular classrooms receive the differential school subsidy for these students.

[43] This is, in effect, a fine-tuning of the system. The correction was introduced recently, as studies showed the virtual absence of private providers in rural areas and the huge educational deficit of rural municipalities.

11,9%, respectively (see Table 9). The amount transferred through vouchers is roughly 82% of total school subsidies,[44] and of voucher transfers 40% went to private schools.

The number of private subsidized schools rose from 1,627 in 1980 to 3,530 in 2001,[45] while the number of public schools fell slightly from 6,370 to 6,242 in the same period. The growth in the private subsidized sector might have been greater if the value of the subsidy per student had not been reduced substantially in the mid-80s. If we set the real value of the subsidy per student at 100 in 1982, by 1985 the value in real terms had fallen to 75, and even by 1990, it stood at 76. This led to stagnation in the number of private schools by mid 1980s after rapid growth in the first half of the decade. The private, subsidized schools survived the decline in the value of the voucher in the 1985–1994 period by increasing enrollment by 25%. During the 90's the fall in the per capita subsidy was reversed, and the real value of the subsidy index reached 104 by 1994, and 192 by 2001. In 1995 the number of private schools started increasing once again (see Table 10).

Table 10: Types of primary and secondary schools

Type of school	1980	1985	1994	2001
Public, Centralized	6,370	808	0	0
(%)	72.4	8.2	0.0	0.0
Municipal	0	5668	6221	6242
(%)	0.0	57.8	63.6	57.8
Private, subsidized	1,627	2,667	2,707	3,530
(%)	19	27	27.7	32.7
Private, no subsidy	802	668	860	1,031
(%)	9.1	6.8	8.8	9.5
Total	8,799	9,811	9,788	10,803

Source: Compendio de Información Estadística 2001, Ministerio de Educación. Private subsidized includes Corporaciones de Administración Delegada.

Since 1993 the private subsidized schools have been allowed to charge fees to their students subject to some conditions, which include an upper limit on the fee (US$67.7), a special tax favoring the Education Ministry, and the availability of scholarships benefiting families that cannot afford these fees. These compulsory scholarships are financed by the schools and by reductions in the special tax amounting to US$20 million. This scholarship program benefits at least eighty-three thousands students. Even though the municipal schools can also charge fees, these are much lower and affect a lower percentage of their enrollment (23% as against 67% of private subsidized students are affected by these charges). In the year 2002, the 1663 private subsidized schools charging fees received Ch$ 126 billion from students' fees, while the corresponding 110 municipal schools received only Ch$2,3 billion. The additional resources in the private subsidized schools may widen the gap between private and municipal schools (discussed below). However, in the year 2001, municipal schools received additional funding amounting to Ch$62,948 MM from the municipalities and Ch$19.913 MM from regional governments for infrastructure.

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[44] This figure was computed substracting from school subsidies merit scholarships, subsidies to adult education, public boarding schools and subsidies for work in stressful conditions.

[45] In 1981, only 15.1% of all primary and secondary students attended the private subsidized system (mainly religious schools) while 38.1% are enrolled in these schools in 2001, while 8.8% of students, most belonging to the higher income groups, attended private schools that receive no subsidy.

4.2 Evaluation

The overall results of the reform of 1981 are still unclear. There is no question that parents value choice, and this is one of the reasons for the wide acceptance of the new private schools. Another fact is that privatized schools require fewer public funds than municipal schools. Indeed, subsidized schools financed their own infrastructure, while municipal schools use the previously existing infrastructure of the state schools. Moreover, regional funds are used to repair or expand the infrastructure of the municipal sector.[46] Another positive effect of the reform is the decrease in the rates of truancy, which is explained by the inherent characteristics of the voucher scheme, though it is possible that the system incentives has led to a loosening of the standards for promotion of students. Although profitability rates are not available, the rapid expansion of private subsidized schools reveals this to be an attractive business for private investors.

A more complex question is whether the reform has added value to education or not. Unfortunately, the scores of the national standardized tests that measure educational achievement (Simce) were not comparable over time before 1998, and therefore cannot be used to assess the impact of the reform. Moreover, the strong reduction in the subsidy per student during the second half of the 80s probably had a negative impact on the quality of education. Results shown in Table 11 are consistent with this hypothesis. Using the private non-subsidized schools as control group, we can see that the relative performance of private subsidized schools deteriorated in the 80s and improved in the 90s, mimicking the fluctuations in the value of vouchers. The decrease in teachers' salaries probably worsened the pool of applicants to teaching schools while existing teachers with the best outside opportunities left the educational system, and this change in the quality of the stock of teachers has long-lasting effects.[47] In addition, the many changes that have been introduced since 1991 (curricular reform, extension of time in class, massive introduction of computers, internet, textbooks, libraries, and so on) make it difficult to disentangle the effects due to those measures from those due to the introduction of market-oriented policies in education.

There has been much disagreement about the impact of the reform on the educational system as a whole. Some experts argue that subsidized private schools provide better education than municipal schools, and henceforth the reform has contributed to better education by partially privatizing the school system. They base their claim in the fact that subsidized private schools on average have performed better than municipal schools on standardized tests. However, the performance gap between the two types of school can be attributed to differences in students' socioeconomic characteristics, including their parents' education.

Private subsidized schools can also select students, whereas municipal schools cannot reject students unless they have no openings (see Gauri, 1998. and Parry, 1996).[48] In a recent survey of the 100 best-performance schools of each type, admissions testing occurred in 88% of private non-subsidized schools, 68% of private subsidized and 22% of public schools. Moreover, private schools have fewer restrictions to expel students than municipal schools. The incentives to select students have increased since Simce results are being published.[49] Student performance does not only depend

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[46] An exception is the fund established to finance the additional infrastructure required for the transition from a two-shift system to a full day system. This fund is open to municipal and private subsidized schools.

[47] After years of decline, the quality of entering students at teaching schools has begun to improve in 1996.

[48] Since this is an area where ideology plays an important role, it is important to read the evaluations with a pinch of salt.

[49] There is a risk that schools start preparing the students to take the test, and reduce their efforts in other dimensions in education. However, if Simce tests effectively measure what students should learn at school, the fact that they are being trained to take them is not a detrimental to their education.

on the quality of the education provided by the school, but also on personal abilities, parents' education, peers' skills and so on (Hanusheck, 1995). Hence, it is rational for parents to send their children to schools that attract the best students. Therefore, prestigious schools can choose their students based on academic achievement prospects, so that standardized tests magnify the contribution of selective schools to the results.

Table 11: Simce Test Results, fourth grade.

	1988	1990	1992	1994	1996	1999[a]/	2002
Type of school:							
Municipal	49.25	56.7	63.85	64.43	68.00	238	237
Private subsidized	56.35	58.8	70.15	70.66	73.65	257	257
Private, non-subsidized	76.15	80.05	86.05	85.07	85.85	298	299

Source: Ministry of education. Note: a/ Before 1998 scores represent percentage of success. From then onwards scores are normalized around 250.

The first empirical studies based on school samples (Aedo and Larrañaga (1994) and Aedo (1997)) concluded that private subsidized schools obtained higher scores than municipal schools. Using the 1996 SIMCE school results for fourth grade students, Mizala and Romaguera (2000) found that socioeconomic variables explain the difference in performance between the two types of schools.[50] McEwan (2001) used student level data for eight grade SIMCE in 1997 found that after controlling for socioeconomic variables and peers there was a difference favorable to catholic subsidized and non-subsidized private schools only, which in the first case was removed after correcting for selection bias. Later studies using disaggregate student data for tenth grade in 1998 confirmed the earlier results showing that private subsidized schools perform better than municipal schools in national standardized tests, even after accounting for socioeconomic variables (Mizala and Romaguera, 2001, and Sapelli and Vial, 2001). Contreras (2001) corroborates these results for the Prueba de Aptitud Académica (PAA, a Chilean version of the SAT). These last two studies correct for selectivity bias. Hence socioeconomic differences of the student body explain part, but not the whole of the performance gap between private subsidized and municipal schools[51].

Possible explanations for the residual gap are (i) that private schools have managed to do better because they are more flexible, efficient and have better incentives, and (ii) that subsidized private schools spend more per student than municipal schools due to the additional fee they charge, but differences are not significant

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[50]Mizala and Romaguera found than once the results are normalized using socioeconomic variables the difference between private non-subsidized and private subsidized schools falls to only five points. This difference may be partly explained by the enormous difference in expenditure between both type of schools, which is not controlled in these studies.

[51] Studies using other indicators of performance corroborate an advantage of private schools. For instance, McEwan (2001) found that private catholic schools have lower repetition rates even after controlling for socioeconomic variables. Winkler and Rounds (1996) found lower costs in private subsidized schools, while McEwan and Carnoy (2000) restricted this finding to catholic schools only, as the others exhibit no difference with municipal schools.

McEwan and Carnoy (2000) suggest that competition has resulted in modest gains in achievement in public schools in Santiago, but slightly negative effects outside of the capital. Hsieh and Urquiola (2001) believe that even if private schools have better performance than public schools the results of the reform might be a deterioration of quality due to segregation of students. As the best students migrated to the private subsidized schools, learning possibilities for students decreased in municipal schools and improved in private schools due to peer effects. They claim that there is empirical support for their theory based on the finding that in those municipalities in which there is a higher proportion of private schools, the average results in standardized tests are worse than the national average. However, the inherent weaknesses of their claim is that it cannot separate clearly cause and effect, since there are many plausible competing interpretations of their results: for example, there might be more students in private schools in municipalities in which municipal schools are worse than average. More recently, Gallegos (2002) has shown that the main results of Hsieh and Urquiola are reversed when instrumental variables for the percentage of students enrolled in private schools are used. Using a better set of instruments and a more complete data set, Auguste and Valenzuela (2003) found that competition has had a positive effect in the overall performance of the system, improving achievement in 0.4 standard deviations, despite being associated with more cream-skimming.

Perhaps the comparison between municipal and private subsidized schools is beside the point, since one of the main benefits of the voucher system has been to increase the awareness of school quality and to make schools behave more competitively. Any analysis, moreover, must consider that there are several reasons why competition between schools – the mechanism through which the quality of schooling was supposed to improve after the reform – was damped in the past. First, parents did not have objective measures of school quality: tests equivalent to the Simce have been used since the 80's, but only in 1995 were these results published at the school level.[52] Second, the Teachers Statute has reduced flexibility in the hiring and discharging of teachers. Third, municipal schools have been shielded from competition.

The idea behind implicit vouchers is that the income of a school should depend primarily on the number of students, and not on historical criteria of budget assignment. However, mayors manage the income from vouchers corresponding to all students enrolled in their municipal school system, and for political reasons some mayors have refused to adjust the expenditures of schools with fewer students[53]. A second factor is imposed exogenously on the system: the Estatuto Docente (Teachers Statute) of 1991, which made it almost impossible to fire teachers independently of their performance, and which set a fixed pay scale that depends on seniority and not on performance (see Beyer, 2000a). Even though the minimum wage established in the Estatuto applies also to the private, subsidized schools, other conditions do not apply, and it is possible to fire teachers at the end of the school year, under the standard rules for labor contracts in Chile.[54]

By setting a national pay scale, the Teachers Statute reestablished a centralized bargaining process between the teacher union and the Ministry of Education, distorting the market. Although the

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[52] Following the publication of school results in the SIMCE since 1995, the media has published tables ranking schools according to SIMCE results. Recently, the Ministry of Education has been publishing results that have been adjusted by family income and other characteristics.

[53] Political surveys indicate that the quality of municipal education is not important for citizens when choosing mayors.

[54] The school meals program may also have a negative impact on competition as meals are awarded to schoolr based on the socioeconomic characteristics of their first grade students. If a student entitled to a meal (breakfast, lunch or both) moves to another school, she may loose it.

Statute was flexibilized in 1995 following a financial crisis in the municipal sector,[55] the teacher's union managed to stop the individual evaluation of municipal teachers' performance for a decade, despite it is part of the Statute. After years of negotiating, and while several municipalities were designing their own evaluation procedures, the Teacher's Union finally accepted a very modest government proposal for teacher evaluations from 2004 onwards.[56]

An incentive mechanism, the National Performance Evaluation System (SNED) that provides supplementary funding to the top quartile of schools was introduced in 1996 to reward schools with better performance. In order to reduce any perverse incentives, the SNED evaluates a school with respect to its own past history and penalizes schools that apply admission tests or expel students. The SNED also introduced incentives for schools located in rural areas that are insulated from competition. Authorities are considering the publication of value added indicators side-by-side with raw scores as well as individual students results.

Despite the claims that school choice would have a dramatic effect on school educational levels, and that most recent studies for the United States seem to prove that choice improves education,[57] this has not been observed. The voucher reform of 1981 has not been translated in a dramatic improvement of school quality and achievement as shown by international tests (PISA, TIMSS), notwithstanding it has been accompanied by several other measures during the 90s. Nevertheless, the latest research results in Chile and other countries seems to favor a positive effect of competition on school performance. Behind the bad international performance of the whole school system might be the already referred factors limiting competition and the decade of low resources that followed the reforms.

4.3 The reform of Tertiary Education

There have been important changes in tertiary education, that is, universities and professional and technical institutes. These changes involve financing, management and the opening of the system to new, private entrants. Once again, the object of the reform was to improve the quality and efficiency of the system by expanding the role of the market. A large number of new, private universities were started after the 1981 reform allowed the creation of new private universities without direct State support. There are now 39 new private universities, which enrolled 32% of all university students in the year 2000. Until 1980 there were only two public universities and five private universities, all of which were financed by the State. In 1981 the regional centers of the two state universities were set up as 17 independent universities (three more regional centers became universities later on).

The financing of the university system changed radically as the responsibility for financing tertiary education was shifted from the state to families. This decision was based on two premises. First,

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[55] The crisis was largely due to the application of a national pay scale based on seniority in a system financed on the basis of student attendance. Many municipalities had salary obligations in excess of their voucher's income because either their personnel was older than average (many above 65 years) or their student/teacher ratios was below average. Due to the Statute, municipalities were unable to fire excess personnel, including those unable to teach. The flexibilization of the Statute allowed for some rationalization in municipal schools, especially rural schools. A once and for all special incentive retirement program accompanied the change.

[56] The evaluation will be carried out every four years, and teachers with permanent contracts might be fired only after two consequential very low grades, which means after eight years of poor performance. So far, the public sector experience with performance evaluation is that all workers receive the highest grade, only a few public universities have taken this process seriously.

[57] Hanushek and Rivkin (2003) and Hoxby (2003).

spending in tertiary education is regressive, since the majority of tertiary students belong to middle and upper income households. Second, the private return to tertiary education is high and externalities are less likely than in primary education, which means that there is less need to subsidize tertiary education since the benefits are internalized. As a result of this change, State financing of the university system was cut from almost 100% in 1980 to around 30% by 2000.

Universities were allowed to raise fees to compensate for the reduction in direct transfers from government. Up to 1981 university fees had been nominal. A state loan program to finance liquidity-constrained students was established. These loans finance student's fees totally or partially, and in the case of very poor students there are scholarships that provide small amounts for living expenses. Given the high rate of return to tertiary education and the fact that most university students are well to do, loan support was considered more equitable than the provision of free education.[58] However, loans have subsidized interest rates (2% in real terms, well below market rates) [59]and the recovery rate is low (66.8%), which implies that the distributional objectives of the reform are not achieved. The low recovery rate of loans has drained the system, drastically reducing the available funds to finance entering students.[60] Moreover students do not know whether they are entitled to financial aid before they start classes, and their loan programs can be cut off before they graduate. Another criticism of the student loan program is that students of shorter technical careers, which usually appeal to lower income families, are not yet eligible for these loans.

Table 12: Enrollment in tertiary education

Type	1983	1987	1991	1993	1995	1997	1999	2000	2002
Universities	108,049	121,219	143,526	188,253	223,889	259,79	286,357	302,572	348,886
Traditional	105,341	113,567	114,698	138,267	154,885	175,641	195,372	201,186	225,781
Private	2,708	7,652	28,828	49,986	69,004	84,149	90,985	101,386	123,105
IP[a]	25,244	29,595	37,376	38,076	40,98	56,972	74,456	79,904	91,153
Subsidized	17,72	10,548	6,802	0	0	0	0	0	0
Private	8	19	30,574	38,076	40,98	56,972	74,456	79,431	91,153
CFT[b]	39,702	67,583	65,987	83,245	72,735	54,036	50,821	53,354	61,123
TOTAL	172,995	218,397	246,889	309,574	337,604	370,798	411,634	435,83	501,162

Source: Ministerio de Educación.
Notes: [a]: Professional institutes. [b]: Centros de formación técnica.

The system through which the state finances universities was also reformed in order to introduce competition. Until 1981, the government made direct transfers to universities to cover their expenditures. By the year 2000, only 41% of all state financing of universities was in the form of a direct transfer. Another 10% went to the universities via competitions for improvement projects, 24% went to students (16% as a student loans and 8% in grants), 7% went to the universities that attracted the best students (defined by their scores on the PAA), 13% through competitive research funds and finally 4% as State matching of private donations. The new, private universities can only compete for the last three sources of funds, and they have argued that this is not a level playing field. On the other hand, they are the main recipients of private donations, which are partly tax-exempt, which means indirect government support[61]. The government is trying to pass a project providing state guaranteed loans to students in private tertiary institutions.

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[58] Almost 80% of applicants receive loan, which cover, on average, 60% of the tuition fees.
[59] The rate subsidization explains almost 50% of the cost of the system.
[60] In addition, the increase in the number of students has also lead to increased pressures on the loan fund.
[61] Tax deductions finance 57% of each peso donated to universities.

Our evaluation of these changes is positive. First, the total enrollment in the university system grew from slightly over 108 thousand students in 1983 to 369 thousand in 2002, vastly increasing access to the university system, even though students pay substantial fees as compared to the almost free universities before 1981. This might be explained by the incentives provided by a high rate of return (above 20%) for tertiary education[62]. Overall access to higher education has improved for all the income groups, but still remains quite unequal as shown by table 13. The likely causes for this segmented access to higher education are the lower secondary school completion rate for students coming from lower income households and the shortcomings of the student loan program discussed above. Although there is no systematic evidence on this issue, the fact that students or their families pay for the costs of the education is likely to reduce the number of years to graduate and decrease dropout rates.

Table 13: Higher education coverage by income quintile*

Income quintile	1987	1990	1992	1994	1996	1998	2000
I (20% lowest)	3.8	4.4	7.8	8.9	8.5	8.7	9.4
II	5.9	7.8	9.8	10.2	15.1	13.3	16.2
III	10.8	12.4	13.2	17.2	21.5	23.0	28.9
IV	20.9	21.3	23.6	32.2	34.7	38.8	43.5
V	40.2	40.2	41.1	54.6	59.7	65.5	65.6
Total	14.8	16.0	17.7	23.8	27.8	29.3	31.5

Source: MIDEPLAN, División Social, CASEN survey, each year.
*Includes Universities, Technical Training Centers and Professional Institutes.

Households have devoted substantial resources to university education, compensating for the decline in government support. According to the OECD (2002), Chile's expenditure in tertiary education, at 1,8% of GDP is well above the OECD average of 1,3%, even though public financing of tertiary education is only 0,57% of GDP, far below the OECD average of 0,93%. Broadly speaking, given that individuals have to pay for their education, the demand driven expansion of the system seems efficient.[63] Second, the increased competition for public funds and, more recently, for students, has had a salutary effect on the system. The concern for the needs of students and for the quality of teaching has increased, as the main universities face an increasing challenge from private universities.

The main problem with the profusion of new universities, however, is that there are few objective indicators that students can use to select an institution. Little is known about the quality of different establishments or the job prospects students will face after graduation. This is a problem given that anecdotal evidence suggests that there are important differences in the quality of education provided by different institutions. In the virtual absence of objective or subjective indicators, competition has been partly based on marketing, which is an important category of expenditure for the new universities.

Since the quality of research at institutions is not yet an important attraction for prospective students, most of the research is still carried out in the traditional universities, due to their longer tradition, their self-defined set of objectives as regards the public good and the fact that they receive

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[62] Recent empirical evidence supports this view (Beyer, 2000b, Bravo and Contreras, 2000, Mizala and Romaguera, 2003).
[63] These assertions needs qualification if loans are not paid back in full, since the implicit subsidy in that case may lead to inefficient investment by students in education. See below.

direct funding from the state. However, the traditional public universities suffer from management problems that may threaten their future. For instance, the professors select the authorities by voting. This means that authorities are responsive to corporate interests, which often conflicts with efficient management. Public universities labor under an inflexible civil service system, another obstacle to good management.[64]

5. Conclusions

The reform of social services in Chile created a system where there is competition between private providers, though the State kept a regulatory and supervisory role, due to information asymmetries and moral hazard, among other reasons. These sectors are characterized by the fact that the government either requires workers to buy their services, or finances them out of public funds, as is the case of education (through subsidies in primary and secondary education and through loans and scholarships in university education). The Chilean social security reforms gave emphasis to individual choice and linked benefits to current and past contributions. In the past, there was no relation between the contributions of workers and the benefits they received, so these were considered as payroll taxes. In the case of health care, higher income workers did not even use the public system.

There are several benefits from the privatization of social services. In the case of the private pension system, the political risk is smaller, increasing the security and predictability of pensions.[65] The burden of the old system –given these political pressures-- was increasing over time and there were doubts about the financial sustainability of the system. The private health insurance system has provided an alternative to the public system for the fifth of the population sizeable that were not satisfied with the public system, while at the same time putting pressure on the public system to improve.[66] Similarly, while the evidence in favor of the voucher system is not conclusive, it has put pressure on the public system to improve. Along the same lines, the increased competition in higher education has led to improvements in the quality of the traditional State financed institutions that now have to compete for their students. An additional effect is the increase in the coverage of higher education.

This does not mean that privatization has been free of troubles. Most households lack the information and/or knowledge needed to make rational decisions.[67] The cost of acquiring the necessary knowledge is high and circumventing the information asymmetry is a hard task for individuals. The role of government as provider of objective information –a public good- has been insufficient, though it has improved in the last few years. As a result, many individuals do not grasp the main aspects that are involved in choosing a provider of social services. The lack of understanding or information on the part of consumers has led providers to focus their competitive efforts on marketing rather than the variables that are relevant from the point of view of an enlightened consumer (extent of coverage of a health plan, long-run net rate of return on a pension

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[64] A distortionary element in the private university system is that they are supposed to be not-for-profit. Many of them are underhand for-profit institutions, however, and they must employ various loopholes to disguise profits. It might be preferable to allow them to exist as for profit institutions and regulate them as such.

[65] Diamond (1994) asserts that this is the main benefit of the Chilean private pension system, which otherwise should be thoroughly revamped.

[66] A recent survey found that most affiliates are unhappy with their Isapres, but more than 80% declared that they do not want to switch to the public system (Adimark, 2003).

[67] Of course, their decisions may be rational in a world where agents have limited rationality. Moreover, rationality lies in the eyes of the beholder.

fund, and quality of education). In order to improve user information, the government could make AFPs provide risk measures of their portfolios. Similarly, the Superintendence should make Isapres publish their rate structure in easily comparable terms, including surgeries.[68] The Ministry of Education should provide parents with information on their children's performance as well as information on the educational value added provided by the school.

Critics of privatization also suggest that it has decreased social equity, an unwarranted claim. Before the reforms, social services were regressive, with most of the benefits accruing to the middle and upper income classes. There was also segregation in the health provision. Until 1979, the Servicio Nacional de Salud (SNS) served blue-collar workers and the destitute through its network of hospitals and clinics, while the Servicio Médico Nacional de Empleados served white-collar workers. The latter system allowed beneficiaries to choose between the SNS or private providers – via copayments.

In education, the main channel for a potential reduction in equity after privatization is an increase in segregation. Many private subsidized schools have focused on the better students, leaving the rest (normally corresponding to economically disadvantaged families) for the municipal system. Under the old system, however, there were public schools that selected their students (and attracted middle class families) and others for students with lower abilities. The coverage of primary and, especially, secondary education was lower. University education was free, but accessible almost exclusively to middle and upper class students, as only a low percentage of low-income students completed secondary education and few of these scored high in the national test used to select students to the publicly funded universities. Hence it is not clear if inequity has increased in education.

To address the equity issue, the government built a safety net for the poor. There is a minimum pension for those pensioners whose funds run out. The public health system serves all those workers whose income does not allow them to buy into a good private plan and the destitute. Finally, most municipal schools are open to all students. Thus, public expenditure can be focused on the poor, and this has already occurred in the pension and the health systems and is being discussed for the school system. The focus of government expenditure in higher education has been on student loans and scholarships for lower income students.

A major criticism of individual choice in social services is that it is costly. In addition to the normal costs that arise from competitive attempts to attract more customers (advertising and the like), there is the specific cost of attracting the better customers because prices are set in such a way that they do not reflect the cost of providing the service to different agents. A potential solution to this problem is to set prices in such a way that all agents are equivalent for the provider. The school voucher could be higher for students that have learning disadvantages. In health insurance possible solutions include the Auge plan which compensates Isapres (or Fonasa) for having beneficiaries that are costlier than average.

Excessive regulations have damped the expected benefits from competition: a more efficient and diverse supply of services. In the case of private pension funds, restrictions on portfolio investment and rules that penalize administrators whose funds perform poorly ex-post (apart from the market punishment due to the defection of affiliates from such a fund), resulted in similar performances from all pension funds. As a result, competition between administrators has focused on variables that are not relevant from the social point of view. Similarly, Isapres offer a wide menu of plans, but

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[68] For the last few years, the Isapres have provided a simplified schedule that can be compared across institutions. However, there is no publicly available source for all treatment schedules.

few of them offered good coverage for catastrophic illness. An Isapre that offers good catastrophic insurance may end up (through adverse selection) with a portfolio of very expensive beneficiaries. Moreover, beneficiaries of the private health insurance system may prefer plans with little coverage for expensive but infrequent diseases because they can always switch to the public system. In education, parents did not have objective measures of school performance until recently, and individual student results are still not provided to parents. The Teachers Statute has reduced flexibility in the public system and municipal schools have been shielded from competition. Schools are restricted by the curriculum set by the Ministry of Education. Hence the full gains from competition have yet to be achieved.

There has been a trend to concentration in the AFP market, which implies that 3 AFPs have 78% of all affiliates. Recently, the same phenomenon has become important in the private health insurance market, with the four largest Isapres having 85% of all beneficiaries (including newly acquired Isapres). The number of institutions of higher education is much larger, but might shrink in the future as some new institutions are expanding quickly. For instance, among Institutos Profesionales, a single institution accounts for 42% of total enrollment. Although this trend might be explained by economies of scale, it is too early to know if it would have negative effects or just reflect stronger competition in the presence of scale economies. [69]

Broadly speaking, privatization has had a positive impact on the provision of social services, by providing competition to public providers (health and education) and insulation from political capture (pension funds). The major lesson, however, is that the full benefits from privatization-cum-competition are slow to arrive, and it requires able regulators to achieve them. Some of the benefits of competition are lost through rent dissipation, especially in the search for the better customers. The existence of these rents is due in part to the limitations of consumers when deciding on highly complex issues under asymmetric information. Another source of inefficiency is created by regulations introduced to avoid moral hazard problems, but which also have the effect of limiting competition. The performance of social service markets has improved recently and this can be attributed to changes in regulation (fewer restrictions and more information), the consolidation of the industries, and hypothetically, better decisions on the part of consumers.

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[69] There are measures that could facilitate competition. A clearinghouse for pension funds that collects payments, keeps records of individual accounts and mails periodic statements to affiliates would reduce the cost to employers (who would not have to pay contributions at various AFPs), but might facilitate entry by having a regulated essential facility performing tasks that have strong scale economies (see Diamond and Valdés-Prieto, 1994). Note, however, that in Chile several financial clearinghouses have been used to forestall competitive entry. Providing new entrants with information on all workers might also facilitate entry.

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