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**Social Services Viewed Through New Lenses:
Agency Problems in Education and Health in Latin America**

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This working paper is the first chapter of a book entitled "Organization Matters: Health and Education in Latin America", Johns Hopkins University Press, forthcoming. Drafts of the case studies are available as working papers from the Office of the Chief Economist, Inter-American Development Bank. They include:

R-301 O Impacto de Gestão sobre o desempenho educacional. Translated to English as: The Impact of Three Institutional Innovations in Brazilian Education
by Ricardo Pães de Barros and Rosane Mendonça

R-302 Organización industrial de la prestación de servicios sociales. Translated to English as: Differences in School Establishments and Student Peformance in Chile
by Cristian Aedo

R-303 La organización industrial de servicios de educación en Venezuela. Translated to English as: Federal, State, and Non-Profit Schools in Venezuela
by Juan Carlos Navarro and Rafael de la Cruz

R-305 Las Igualas médicas frente al seguro social. Translated to English as: Social Security and Private Prepayment Plans in the Dominican Republic
by Isidoro Santana

R-306 Organización industrial de los servicios de salud en Chile. Translated to English as: Competition, Vertical Integration, and Performance in Chile's Private and Public Health Services
by Ernesto Miranda and Ricardo Paredes

R-307 Regulación y desempeño comparado de dos subsistemas privados de salud en Uruguay. Translated to English as: Regulation and Performance of Private Health Systems in Uruguay
by Gaston Labadie

Abstract

Latin America spends large amounts of resources on social services, yet its life expectancy and education levels are low compared to other regions with similar levels of income. A key reason is the inherent difficulty of making social services produce efficiently in reponse to demands and needs.

This article shows how improving the organization of these service systems can make a significant difference in health conditions and student learning. A general framework applying the lessons of theories of the firm to the particularities of social services is developed, followed by a summary of case studies which assessed the impact of organization on performance in education (in Brazil, Venezuela and Chile), and in health (in Uruguay, Chile and the Dominican Republic).

The paper shows that the relationships and rules followed by governments, service providers, and consumers can mean the difference between success and failure. It also describes a wealth of approaches, some of them with long histories, that point toward better ways of organizing social services and ultimately improving health and education in the region.

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Organization Matters

Health and education systems in Latin America have made dramatic strides in increasing literacy and reducing mortality and morbidity over the last thirty years. Nevertheless, the region expends large amounts of resources in these services, occupies a large share of its skilled human resources, and fails to perform as would be expected given its level of income.[2] The diagnoses of inefficiency and inequity are ubiquitous; and the recommendations are generally quite clear: the systems need to be open to innovation (pedagogical and medical), to provide sufficient complementary inputs and maintain facilities. In the case of education, teachers need to have better formal and in-service training, better working conditions, and adequate leadership and support. In health, care needs to be shifted toward preventive medicine and access needs to be increased.

Knowing all this, however, fails to explain why the region systematically lacks in-service training, books or maintenance . Attributing these failures to weak bureaucracies or political interference are facile explanations that confuse symptoms with causes. Instead, analysis of the organization of social service systems in terms of the delegation of functions and the system's mechanisms for coordinating individual decisions can lead to practical recommendations that address fundamental flaws. Such recommendations can have an impact in the short run, by reorienting the incentives that motivate service providers, consumers, and policymakers. They can also affect the long run by establishing dynamics that strengthen groups and individuals with the greatest interest in positive performance.

The essays in this book grew out of a recognition of these issues as they have come to be debated in Latin America, and they seek to apply a framework that is relatively new to the fields of education and health in Latin America. This first chapter proposes a method of analysis that relies upon theories of the firm and of agency. In the subsequent chapters, the authors have chosen at least two education or health systems to compare within a particular country. The comparisons demonstrate the ways that differences in organization affect performance. As a result of these studies, the book argues that the way health and education systems are organized in Latin America creates incentives and accountability mechanisms that can explain their differing impact on education and health conditions.

Missteps Along the Way

The assembly line in factory production has long been the classic example of how organization can affect performance: from Adam Smith's rendering of the division of labor in a pin-making shop, through the Ford assembly plants of the early 20th century. However, another classic story has emerged in explaining how General Motors surpassed Ford in mid-century.[3] Whereas the Ford motor company continued to produce homogeneous products within a highly hierarchical management structure, General Motors experimented with creating different divisions that could design different cars, interact with other divisions horizontally for a wide range of activities, and be compared one to another regarding their performance. This innovation in organization helped General Motors solve several problems simultaneously. Not only was it easier to monitor the performance of smaller production groups with independent output measures, but it became possible to attribute performance to the

2See Inter-American Development Bank (1996) and Londoño (1996).

[3]See for example the treatment in Milgrom and Roberts (1992).

division's effort by comparing it to other divisions (since all the divisions were equally influenced by outside factors not "visible" to higher management). Secondly, the new organization forced divisions to face clear incentives regarding the timing and use of inputs. Third, the divisions had greater flexibility and could take advantage of their decentralized information to make adjustments to the mix of inputs, and the allocation of resources among different functions. Finally, the divisions themselves had a direct interest to innovate, seeking new market niches, developing new products and new features, finding more cost-effective materials, and improving internal efficiency. Thus, General Motors was better able to respond to changing markets, reward innovation, and use decentralized information more effectively.

The education and health systems which emerged in Latin America in the middle of this century can be compared to the Ford model of service production. The aim was to create a homogeneous service for all citizens. And although an assembly line was the farthest thing from a model for education and health, the administrative structure to direct and manage these social services followed a similar logic: the central management planned the provision of services, it allocated resources, distributed inputs, and gave directives as to how the services were to be provided.

The education and health systems did, however, differ in two very important ways. First, their services were given away for free. This left them with no competitive pressures to fight for clients, and no incentives to adapt or expand their output. Second, the public systems were so dominant in their sectors that they had monopsony power in the employment of teachers, doctors, nurses and other specialized personnel. Once employees unionized to confront this monopsony power, the resulting bilateral negotiations rigidified and restricted employment management practices. Furthermore, the package of pay and benefits was modified to respond to budgetary and administrative requirements, often keeping pay low but providing generous "off budget" benefits such as pensions and early retirement. This distortion in the payment package made it difficult to respond to changes in the labor market, as well as to attract and motivate high employee performance. Guaranteed public financing in these systems meant that the providers did not have to market their services, which insulated them from consumers. Meanwhile the rigid employment contracts insulated providers from external accountability to the government.

The limitations of this model in Latin America have been explored and debated in numerous studies. However, the recommendations emerging from these debates have revolved around two incomplete and generally misleading concepts: Decentralization and Privatization.

With rising dissatisfaction from centralized service systems, it was perhaps natural that the opposite would be considered an avenue for improvement. Theoretical support for decentralization came from a literature which noted that public services can be provided more effectively when they are organized to serve groups with relatively homogeneous preferences. Research emphasized the lower costs of collecting and processing information for smaller areas or organizations. Further support came from recognizing that local public officials can be more accountable for decisions affecting local conditions than national officials who respond to a wider constituency. The potential gains from decentralized distribution of management, decision-making, and accountability were apparent.

However, equally strong critiques have been made of decentralization because it poses problems related to economies of scale, scope, equity, and the persistence of political manipulation at different levels. First, the units of service production have to be large enough to capture certain scale economies. For

example, it is not clear that most municipalities are in any position to run a health insurance scheme because that generally requires covering at least 100,000 people to be economically efficient. Second, the literature recognizes that services should be organized in large enough units to internalize externalities. Management of sewerage systems, for example, has to be organized in a way that addresses the impact of effluents from one community on another. Third, decentralized systems have the potential to be inequitable. Redistribution from one community to another is more difficult when financing and provision of services is self-contained within financially homogeneous communities. Finally, the advantages of local accountability may be offset by opportunities for local corruption. Local accountability clearly depends upon the strength of political process and the distribution of power within a particular area. Decentralization does not necessarily resolve such problems.

Even if decentralization may be an appropriate response to the problems of providing social services, the actual implementation of decentralization in the last decade has had its share of problems. In many countries, decentralization as a political program has often been used to hide a continuance of centralized administration behind a screen of decentralized organizational charts. In some cases, the policy of decentralization has resulted in the creation of new administrative regions, justifying employing more bureaucratic staff. Furthermore, where decentralization has actually occurred, it has been unbalanced in the sense that functions or resources are delegated to lower levels of government without a fully articulated system to support, coordinate and moderate the actions of these many agents. Many articles have discussed the problems of decentralization in its "pure" form and the kinds of arrangements and assignments of functions that would best address the goals of public policy. But the policy debate, which has been fairly simplistic, has now responded with discussions of the need for "recentralization" — a particularly puzzling term since the focus ought to be on what functions are best discharged by whom, rather than letting the pendulum swing once more. Policy analysis and debate needs a fuller appreciation of what makes a social service system function than the decentralization debate has been able to offer.

The other dichotomy that has clouded debate over the last decade has been the privatization of social services. Again, in seeking a new approach, the contrast with public systems led people to the private sector for solutions. This was also motivated by a recognition of certain gains from the private sector: incentives to reduce costs, increase output, and induce innovation. Private provision of services is expected to reduce costs because it places an agent, the owner or owners, in a direct position to profit when they can provide the service at a lower cost. This is in direct contrast to public services where any innovation that reduces costs reduces pressure on a government agency budget, i.e. no one in particular gets a large benefit. Private provision also holds the promise for expanding output of services because, again, the owners profit any time they can provide services to another person for whom the marginal payment exceeds the marginal cost of provision. By contrast, public managers do not necessarily receive extra budget for serving more clients, and certainly do not benefit in terms of their personal remuneration. A third advantage claimed for the private sector, when it operates competitively, is that it fosters innovation. Public bureaucracies find it difficult to take risks on new ways of providing services. When they do take risks and make major changes, failures have country-wide implications. Small private firms, however, can take risks that generate information and new technology without jeopardizing the system as a whole.

When using their broadest brushes, the advocates of privatizing services paint a picture that fails to recognize its limitations. First, private firms respond directly to effective demand not to broadly stated

social or community goals. Therefore, privatizing services would still, in the case of social services, entail public involvement in financing and subsidizing such services. Second, market efficiency requires that consumers be well-informed and can exercise their option among providers. But the quality of different education and health providers is not necessarily apparent and switching from one service to another may be costly. Third, the risk of private providers failing for financial reasons is more problematic for social services than normal consumer products because of long term commitments in education or insurance commitments in health.

The debates and analyses surrounding privatization have also been misleading and incomplete. They have been misleading because they focus on private or public ownership as the critical factor when in fact many public systems also have competitive pressures and efficient incentives. In other words, many of the advantages ascribed to private provision do not necessarily require private ownership. General Motors solved many of the problems faced by public service systems related to imperfect monitoring, weak incentives, and little innovation by creating "internal" markets between its divisions, while retaining full ownership. In the same way, many social service systems have introduced changes that mimic the private sector without eliminating public "ownership". Countries as diverse as Sweden, France and the United States have modified social services with measures such as performance budgeting, competition, and efficiency pricing to reap the rewards of these "market" mechanisms within wholly publicly-owned and operated systems.

The debates around privatization have also been incomplete because they have not sufficiently addressed the contextual issues that can make a privately operated system serve the public interest.[4] It is widely agreed that private provision of social services require "regulation", but the character and content of that regulation is still poorly understood. Such regulation would have to address traditional regulatory questions such as anti-trust enforcement, minimum service or disclosure standards, and limits on adverse selection in insurance, as well as new areas such as addressing the redistributive impact of a highly decentralized process.

The debates over decentralization and privatization have created many missteps along the way toward better health and education systems. Nevertheless, they have yielded valuable analyses and motivated several experiments in the region which go beyond these misguided and simplistic levels of discussion. In these cases, they have made changes in the dimensions that are really essential to the problem of social service provision -- the problems of agency and regulation which will be discussed next.

New Lenses: Theories of the Firm and Agency

Once the diversions created by the debate over decentralization and privatization are set aside, a more complete framework can be used to analyze and make recommendations regarding improvements in social service systems. A useful framework is provided by the extensive literature on Industrial Organization and its various branches. As in the comparison of General Motors and Ford, many studies have illuminated the principles underlying effective forms of organizing public and private firms — issues related to delegation, transaction costs, and the relative efficiency of hierarchical and horizontal

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4 There are, of course, many studies that give more nuanced perspectives than the ones described here. Consider, for example, Van der Gaag (1995) and Zuckerman and de Kadt (1997).

arrangements. Other studies have focused on how to improve the social outcomes of the interaction of firms within the market — addressing questions of monopoly power, information, and regulation.

The organization of firms has evolved significantly from the characterization of firms by a simple production function, as it is found in neoclassical texts, toward models that view firms as a nexus of implicit or explicit contracts. This view does not necessarily supplant the neoclassical model for its main areas of inquiry related to allocation and market efficiency. It is, however, essential to investigate important social and economic questions regarding the size of firms, mobilization of financing, sources of innovation, and externalities of the workplace, among others. The literature has analyzed "the firm" as an institutional arrangement that reduces transaction costs, that establishes a nexus of contracts, that generates and economizes information, or that results from cooperative "games".[5] A common aspect of all these models is that they open the "black box" of the firm and analyze behavior of agents within the firm in relation to one another and the external environment. A number of particular relationships have received extensive analysis such as the implicit contracts between employers and employees and the potential divergence between the actions of managers and the interests of shareholders.[6]

Another part of the industrial organization literature has focused upon the interaction between firms and whether this interaction is socially optimal. The classic problem in this literature is the existence of natural monopolies, leading to prescriptions for efficient regulation of a single firm.The literature also demonstrates how the introduction of competition can improve social welfare — either by forcing potential producers to bid for a franchise (in cases with ever decreasing average costs) or by enforcing anti-trust provisions to maintain a competitive market (in cases where scale economies are modest relative to the market).[7]

Applying the insights from this literature to social services has shown that there are two related ways that organization affects performance. The first is related to the theory of the firm and in particular the concept of *agency* – how society delegates functions in its social service systems. The second is related to the literature on regulation and is focused on the distributional implications of different forms of organization along with the policies to address them.

Agency in Social Services

With any kind of division of labor comes the delegation of certain responsibilities. Economists have demonstrated that under common conditions, any time one person (denoted the *principal*) delegates a

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5Consider Oliver Williamson, "The Vertical Integration of Production: Market Failure Considerations", *American Economic Review*, 1971; Oliver Williamson, *The Economic Institutions of Capitalism*, New York: The Free Press, 1985; Michael Jensen and William Meckling, "Theory of the Firm: Managerial Behavior, Agency, Costs, and Capital Structure, *Journal of Financial Economics,* 1976; Masahiko Aoki, *The Cooperative Game Theory of the Firm*, London: Oxford University Press, 1984.

6For implicit contracts between employers and employees see C. Azariadis, "Implicit Contracts and Underemployment Equilibria", *Journal of Political Economy*, 79, 294-313, 1975; for manager-shareholder issues, see R.A. Lambert and D. F. Larcker, "Executive Compensation, Corporate Decision-Making, and Shareholder Wealth: A Review of the Evidence" *Midland Corporate Finance Journal* 2(4), 6-22, 1985. For a textbook treatment of these issues see Milgrom and Roberts (1992).

7See, for example, Laffont, Jean-Jacques and Jean Tirole, *A Theory of Incentives in Procurement and Regulation*, Cambridge, MA and London: The MIT Press, 1993.

function to another (denoted the *agent*) certain problems emerge.

In its simplest form, the outcome of delegating responsibility to an agent will be inefficient whenever (i) there is a divergence between the objectives of the principal and the agent, and (ii) the principal and agent have different information about events (asymmetric information).[8] Consider the example of a principal who wants to hire an agent to produce goods. The principal's objective may be to maximize output, but the agent may want to minimize effort, i.e. a difference in objectives. If on top of this, the principal cannot directly observe the agent's effort in production (i.e. asymmetric information) it becomes very difficult to know whether output is being maximized or not.[9] If the principal offers the agent a fixed payment for time spent on the job, the agent has very little incentive to put in any more effort than is required to avoid being "caught" shirking. If at the other extreme, the principal offers to pay the agent on the basis of output alone, the agent has a large incentive to expand output, but only by assuming the risk for conditions outside the agent's control that may affect output (e.g. material inputs not arriving on time, weather). The simple principal-agent problem can be compounded by the introduction of multiple principals.[10] In such cases, a particular principal is not only trying to hire an agent, but has to worry about the impact of other principals on the agent's behavior. This is an issue for the government when it hires people to staff its regulatory agencies who can be influenced by the regulated industry when it implicitly offers future employment possibilities.[11] It occurs in the health care sector when doctors are paid by insurers but chosen by patients.[12] In fact, social service systems are highly complex and involve multiple principal-agent relationships: voters and government officials, political leaders and bureaucrats, Ministries and staff members, managers and doctors, school principals and teachers, parents and schools, hospitals and medical staff, doctors and patients, to name just a few.

In social service systems, societies have developed a range of structures – with varying degrees of incentives and accountability – to solve these problems, but difficulties remain. The most obvious solution is for the principal to simply order the agent to do exactly what needs to be done. Although never fully realized in practice, this approach is implicit in many of the centralized health and education ministries of Latin America and the Caribbean. However, this option is limited in several ways (as frequently discovered by many organizations). First, the principal may not have all the information he or she needs to make proper decisions. Hence, resources for repairing hospital roofs or distributing books may not arrive at the right place when they are needed. Second, the principal may not be able to observe the agent's actions. It is very costly to monitor geographically dispersed agents to be certain they are complying with the principal's orders. Third, the principal may not be able to attribute the outcomes to the actions of agents. The resulting test scores of students reflect more than just the effort of their teachers; a patient's health is affected by other conditions beyond the intervention of medical personnel.

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8 Models can also be developed where the information assymetry is generated or compounded by uncertainty. However, uncertainty is not sufficient as long as the principal can observe that the agent is fully applying the contracted level of effort.

9 For greater discussion of the Principal-Agent Problem see Milgrom and Roberts (1992) and Spremann (1989).

10 See J.E. Stiglitz, "Credit Markets and the Control of Capital", *Journal of Money, Credit, and Banking*, 17, 133-52, 1985.

11 Consider, for example, Spiller (1990).

12 See Ellis and McGuire (1993).

Consequently, any division of responsibilities necessarily involves giving discretion to the agent. But if the principal is clever, he or she can organize the system – with incentives and accountability – in ways that encourage the agent to do things that are more in line with the principal's own objectives.

One example is to *reward outputs rather than inputs*. By measuring some form of output and linking an agent's pay or status to those outputs, it creates an incentive for greater productivity. The Chilean education system establishes that public funds will go to schools largely on the basis of student attendance. The more students attend, the more resources are allocated. Consequently, schools have an incentive to attract and retain students in their programs. They are held accountable to the degree that parents pay attention to school test scores and reputation, choosing among schools on the basis of their perception of performance. In the health sector, numerous studies demonstrate that doctors who are paid a fee for each service they perform are much more "productive", in the sense that they provide more services than doctors who are on fixed salaries. Medical providers who receive payments for the number of clients they serve also have an incentive to seek out new patients – an incentive scheme that has been used very effectively to expand health service coverage in Colombia among its poorer citizens.

The second thing the principal can do is to *increase the accountability* of the agent. This requires several related actions: delegating authority to the agent, generating information about the agent's outputs (or activities), and giving oversight to an interested party. A recent education program in the Brazilian state of Minas Gerais demonstrates all three of these features. Primary schools have been given financial autonomy over their non-payroll budgets. This means they can allocate resources according to their knowledge of local conditions and priorities; for example, deciding whether it is more important to paint the classrooms or buy new maps. Alongside this increased autonomy, the state has also established standardized examinations that are used to measure school performance against other schools and over time (adjusted for socioeconomic conditions and other factors). But it is not sufficient to have the state education department review these test results and monitor school performance on a daily basis because it is so costly. Therefore, the state also established community councils (*colegiados*) composed of parents, teachers and community representatives who have the authority to audit school spending, set the local budget, and deal with some personnel issues. The creation of the *colegiado* is a more efficient solution to the state's difficulty in monitoring performance since the community has its own direct interest in schools that function well.

A very important instrument for increasing accountability is through the use of *contests*. Organizations as different as the Chilean education system, General Motors and the Swedish health system have all introduced contests of one form or another between different service providing units. Sometimes these contests take the more limited form of publishing information about relative performance, in other cases they involve competition between divisions or service providers to attract clients. Such contests are useful because they can help generate information, encourage innovation, and reward good performance.

One of the key advantages of systems *with contests between providers* is their capacity to generate information.Agents who are more autonomous and accountable can justifiably be compared to one another. The school or hospital in such a situation can no longer plead ignorance of its budget or of the kinds and number of services it provides. Instead, the providers have a direct interest in collecting, organizing and providing information that demonstrates their worth. That way, they can argue for continued support from their constituency. They also have a clearly-defined responsibility to provide

the services for which they receive their budgets and their salaries.

Second, greater pluralism means that service providers — managers, teachers, and doctors — can have both the capacity and interest to innovate and experiment. Because they have authority to make decisions and adaptations, they have the capacity to introduce changes that may make their own work easier or more productive. Because they are subject to evaluation and comparison to other providers, the implicit rivalry can generate an interest in learning from groups that have solved similar problems or discovered more effective methods. By monitoring such variations, public policymakers can also detect better ways of teaching or improving health and disseminate them.

Third, contests can be particularly effective when used to reward or sanction performance. Systems that are fully public, with no consumer choice, can still use contests to highlight which schools or medical plans have achieved targets or performed better than their peers. When such contests are tied to budget discussions, they can set the stage for negotiating performance improvements and evaluating managers and teams.

Public systems that include explicit mechanisms for exercising consumer choice, such as the Chilean education system or the Colombian health plan, make even stronger use of the "rewards and sanctions" side of contests. When consumers can choose among providers, feedback regarding performance comes directly from the registration or exit of students and patients. The payment mechanism assures that the ones who attract more clients are rewarded, those who lose clients are penalized. Furthermore, this kind of responsiveness encourages dimensions of service quality (such as "service with a smile") that are impossible to legislate or monitor bureaucratically.

The advantages of pluralistic systems that include contests are best realized under certain conditions related to information and collusion. Information is extremely important to an effective use of contests. The information upon which contests are judged should be as reliable and as closely linked to desired outcomes as possible. When this is achieved, providers' incentives are more clearly aligned with the social aims of providing these services. In the event that consumer choice is involved, consumers need clear and relevant information. Sometimes this requires imposing structure on the services provided, such as limiting the range of health plan options or requiring disclosure of standardized information. The other factor, collusion among providers, can clearly undermine contests. Particularly in systems with choice and limited direct regulation, some kind of anti-trust surveillance is important to assure that the social gains from contests are achieved.

The problem of efficient delegation in social services systems is much more fundamental than the general discussions of privatization or decentralization. Using agency theory, it is possible be more systematic and thorough in evaluating the alternative ways of better structuring social services. Such an approach highlights the critical roles that can be played by improving the linkage between resource allocation and payments to outputs. It suggests the importance of structuring social services to increase the autonomy of service providers, information about their activities, and oversight by interested parties. It makes possible a more sophisticated view of competition than is usually developed in the literature on privatization since contests and competition can be used within the public as well as private spheres.

Distributional Implications of Organization

Equity is an important consideration in social services. However, equity has been poorly served by systems that tend to concentrate resources in richer and urban areas rather than respond to needs and demand for services independent of income and political clout. Delegating more responsibilities to social service providers and introducing pluralism or even competition might be advantageous to higher income groups and those with greater capacity and access to the political system. On the other hand, many of the allocation mechanisms (such as capitation — paying for each student served or for each citizen affiliated with a health plan) actually do more to equalize the distribution of resources among citizens than other more traditional approaches. In this way, the structure of payments discussed above can have a very strong egalitarian impact on social services.

Other payment systems can lead to inequalities when consumers are given greater choice and are allowed to complement public funding with their own resources. The Chilean health system allows individuals to choose among private and public health plans, and the better quality private plans serve clients whose insurance premiums are high enough to cover such services. Lower income individuals are effectively excluded. The recent Colombian health reform addresses this problem by creating a "solidarity fund". This fund channels a portion of the obligatory payments from higher income individuals to cross-subsidize the lower income individuals. As in the case of contests, any system will be more equitable to the degree that all potential clients have access to information about different services, the capacity to evaluate it, and the means to act on their decision.

Problems of *adverse selection* deserve special attention in social services because students and patients are not all the same. Some cost more to serve than others. Unless some adjustment is made for these variations institutions in more pluralistic systems will either be discouraged from providing services or they will find ways to discriminate among their clients. This "adverse selection" can occur when schools that are under pressure to show high test scores discourage slower learners from applying or when health insurance plans decide to exclude older clients who are at higher risk of illness. These difficulties can be addressed by various means. In education, additional compensatory funding for disabled students can overcome the financial disincentive to attract and teach them. The same can be done for schools serving lower-income families where adjusting for the risk of higher costs may be important. In health, pre-establishing groups (such as by geographic area or employer) who choose medical plans collectively can also diminish the negative impact of adverse selection. This partly resolves the problem by pooling high-risk with low-risk individuals.

Addressing the distributional implications is important regardless whether the system is centralized or decentralized. While, the traditional centralized systems are theoretically capable of being redistributive, in practice the lack of transparency and the political pressures on the systems lead to significant failures. By contrast, the inequities of resource allocation become readily apparent in systems which give service providers greater autonomy. This generates information which can be used in the design of better allocation rules.

The rest of this chapter discusses the six case studies in education and health that utilize this approach. By comparing education and health systems within the same country, these studies have been able to isolate the impact of organization on performance from international differences. They have shown that schools in Venezuela, Brazil and Chile that had greater autonomy and accountability tended to perform

better, even after controlling for the socioeconomic background of their students. The health providers in the Dominican Republic, Chile, and Uruguay which were more autonomous and faced competition were also systematically attracting new clients while controlling costs. In the studies on health, distributional issues also come to the fore because of the potential for adverse selection and the impact of flight by higher income groups from the public systems.

Studies in Education

The case studies on education present comparable approaches to measuring the impact of particular measures affecting managerial discretion, supervision, accountability, and performance. In Chile and Venezuela, the existence of schools which are publicly-funded but managed by non-governmental institutions made it possible to demonstrate, in some detail, the advantages of greater autonomy for schools in the allocation of resources, management of their personnel, and accountability to their sponsors or clients. In Brazil, a statistical analysis comparing the public school systems of different states which introduced innovations in school level management, election of school directors, and parent-teacher councils was able to show the degree to which such changes had an impact on student test scores, attendance, and repetition.

Although the studies in this book emphasize and evaluate organizational impact on educational performance, other studies have addressed the question somewhat indirectly by looking primarily at the difference between private and public schools. In the U.S. such questions have been addressed by Chubb and Moe (1990), Manski (1992), Hanushek (1994), Hoenack (1994), and Hoxby (1996). In Latin America, numerous studies have found that private schools perform better than public schools even after controlling for selection and socioeconomic factors, including Valdés (1997), Saavedra (1996), and Cox and Jimenez (1987). Recent studies by Van der Gaag (1995) and Zuckerman and de Kadt (1997) confirm these differences and ask questions related to the sources of the private sector advantages. In some of these studies, the emphasis on the private-public distinction has distracted attention to some degree from the organizational features that can make either private or public schools function better. The case studies in the education chapters demonstrate how, even within the public sector schools, incentive structures make a difference.

Chapter 2 compares several kinds of schools in *Chile* which receive similar amounts of funding but are organized differently, face different incentives, and vary significantly in terms of student test scores. The Chilean system is unique in Latin America because it allocates resources to schools on the basis of the number of students who attend and it allows non-governmental schools to compete for students and public funds. Better than any other case, the Chilean education system confounds the traditional distinction between private and public schooling. To be sure, some 8.5% of students still attend traditional privately funded privately run schools. But leaving aside these private schools which finance themselves exclusively through tuition and serve only higher income groups, Chile has a large and growing number of schools which are managed privately but which are financed from taxes. Therefore these schools are accessible to students from a wide range of socioeconomic backgrounds. As a result, the study is able to confirm that these publicly-funded private schools, operating with similar amounts of money, have higher test scores than the municipal schools even after controlling for the socioeconomic background of students and selection effects.

The advantage in test scores (71% for privately-operated and only 64% for municipal schools) is partly

a result of more motivated or more capable students seeking the private schools. But even after controlling for these factors, a test score advantage remains -- ranging from more than 13 points for Catholic schools to about 3 points for the private non-religious schools. From interviews with teachers and director, it appears that better test scores were associated with the greater autonomy and clearer incentives in the non-municipal schools.

Directors' incentives differ because a non-government school is run by its sponsor and its director within a clear and unforgiving budget constraint. In fact, a recent study by Larrañaga documents that the non-government schools operate with less funding on average than the municipal schools.[13] By contrast, municipal schools are run by the municipal government that complements shortfalls with its own resources. This soft budget constraint gives the school few rewards for improved performance and no sanctions for poor performance.

Directors can be extremely important to schools for providing leadership, selecting and managing personnel, making budget decisions and setting priorities. Carrying out this role depends in turn upon their knowledge, scope of action, mechanisms for obtaining resources, and accountability. Directors in the municipal schools had very little notion of how much their schools cost to run, whereas the Directors in the non-governmental schools were informed of the broad outlines of their budget and collaborate on the preparation of budgets with their superiors. The degree of autonomy in the non-governmental schools made it possible for more innovation to occur: changing schedules, teaching methods, textbooks or content to respond better to their students. In the non-governmental schools, directors also have greater scope of action with regard to teachers; they can select, discipline and reward teachers. The selection of good teachers was judged to be one of the most important functions and capacities of a director in these non-governmental schools. By contrast, directors in municipal schools had very little input to the selection and management of teachers whose contracts are rigidly influenced by the national *Estatuto de Docentes*.

Human resource management differs in other significant ways, as well. The teachers in the municipal school system who are covered by the *Estatuto de Docentes* enjoy strong job guarantees, protecting even their right to teach in a particular school, and have no links from pay or stability to performance. In interviews, they recognized that the non-government schools do a better job of teaching and attributed it to better infrastructure, being more demanding on teachers, and the ability to select students. They felt that the municipal schools had better benefits, job stability, and were less demanding. By contrast, teachers in the non-government schools are ruled by the national labor regime which gives them fewer job guarantees. Nonetheless, the teachers in these schools who were interviewed expressed that they feel they have job stability -- just that it depends on their performance rather than a union contract.

Some of the consequences of these differences are seen in better collaboration between sponsors and directors in privately-run schools than between public school directors and the municipalities that oversee them. Even within the municipal schools, those which are administered directly by the municipal government (DAEM) do not perform as well as those managed by a public corporation (*Corporaciones*). More innovation is seen in the private schools, which also subsidize in-service training more than the municipal ones.

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13 See O. Larrañaga, "Chile: A Hybrid Approach", in Zuckerman and de Kadt, eds. (1997), pp. 19-62.

The study recognizes that public schools do have to fulfill obligations from which the private sector is exempt (including special education and schooling for more disadvantaged children). But the constraints under which the Municipal schools operate in terms of management and budget create incentive problems; the municipal school is restricted in the ways it can manage its personnel and it faces soft budget constraints. By breaking the sample into many categories, not just private versus public but also between religious and non-religious schools, between DAEMs and *Corporaciones*, the paper shows that institutional arrangements make a difference where it counts -- in student learning.

Chapter 3 comes to similar conclusions about the organization of schools in a study that focuses on the public sector in *Brazil*. Using the evidence afforded by state initiatives to implement three kinds of innovations at different times over the last 10 years, and a data base of test scores which have only become available since the late 1980s, Barros and Mendonça show systematically that organization can affect student performance. Nevertheless, since innovations tend to have been introduced in states with other positive factors related to family background and teacher quality, it is difficult to attribute the differences the organizational innovations alone.

Brazil's municipalities are formally responsible for primary education; however, in most cases, the networks of State schools cover more students than do those of the municipalities. With the political "opening" of the 1980s, people demanded greater avenues for democratic participation and local involvement in schools. As a result, many states began to create parent-teacher councils (*colegiados*) to govern schools, to allow school directors to be elected by the community, and to give schools greater financial autonomy. Although these innovations were originally introduced as ends in themselves – to increase democratic participation after years of military rule – these innovations were later supported for their expected impact on school performance.

Financial autonomy gives the school the power to act on its local knowledge of what is most important . There is a potential tradeoff between the efficiency gained by using this local information to make a better allocation of school funds and the loss of scale economies which are possible with central purchasing and planning. Nevertheless, the experiments with financial autonomy in Brazil are fairly limited; spending authority at the school still excludes teachers' salaries and investments, focusing almost exclusively on maintenance, teaching materials, and general consumable materials.

The parent-teacher councils create a new forum for monitoring, judging, and holding schools accountable by a very interested party in the community -- parents. The role of parents is expected to support decisions which are focused more on improving school performance, although parents may be least informed as to the best pedagogical methods, curricula, or teaching materials. Teachers, on the other hand, may be better informed but have a vested interest in improving their pay and working conditions – which can be at odds with the best interest of students or taxpayers. In cases where financial resources are transferred to the school, the councils may play a very important role in auditing school expenditures to minimize misallocation and corruption.

The election of school directors is also a way of increasing accountability. In theory, a well-informed central office might select the best candidates for school principals; however, in practice state-level politicians treat appointments to the position of director as spoils. Selection of school directors by community representatives may be more effective for several reasons. The community may better evaluate the local needs and partiular characteristics of cadidates. The community has a strong direct

interest in choosing the best candidate. And, the election of directors insulates these appointments to some degree from state-level political interference. To incorporate technical criteria which the community may not be able to judge, the state of Minas Gerais uses an interesting mixture of these two mechanisms. Candidates are put through a series of state examinations and only top three qualified candidates are placed before the community for discussion and vote.

Looking at the data as a panel, including 20 states that introduced these innovations at different times during a 10-year period, confirmed that these innovations may have improved school performance. On average, states which transferred financial resources to schools, elected school directors and created parent-teacher councils had better school attendance, lower repetition rates, fewer delayed students, and better test scores. However, the states which adopted these innovations were also, on average, more likely to have higher incomes and better quality teachers. After controlling for these observed factors, and unobserved factors using a fixed-effects model, the results are not as statistically clear. Once these controls are introduced the election of school directors fails to show a significant impact on student performance. However, even after controlling for these other factors, transferring financial resources and creating parent-teacher councils has a measurable impact on improving school attendance and reducing the share of students who are behind in their studies.

In *Venezuela*, schools with greater autonomy, clear budgets, and more flexible contracting arrangements clearly performed better. In this case, Chapter 4 describes three kinds of schools — those run by the national Ministry of Education, by the state of Mérida, and by a religious organization called Fé y Alegría. The three systems are comparable in the amount of resources that they spend. Although Fé y Alegría selects the students who attend their schools, the organization's commitment to educating children from poor families means that the students come from similar socioeconomic backgrounds to those in the state and national schools that were studied. However, the schools differ in the way they are organized and managed. By analyzing these differences, the chapter shows that centralized management, strong unions, and overspecified contracts are associated with less efficient spending, ineffective supervision, and lower morale. For example, the Fé y Alegría schools spend about 12% of their budget on teaching materials, maintenance, and items other than teachers' salaries; while the state and national schools spent 5% and 1%, respectively, on these important non-salary expenditures. Also, the employment contracts in the Fé y Alegría schools are only two pages long, leaving the teachers and school directors who supervise them sufficient room to develop trust and interpret the various obligations and rights in their particular context. By contrast, teachers hired in national and state schools have collective contracts which are extremely detailed and make it very difficult to apply effective personnel management to specific cases.

This clear impact of organization on intermediate factors in the operation of schools seems to have had an impact on student learning as well. Students in the Fé y Alegría schools performed significantly better than those in the other schools on reading, writing and mathematics examinations. Meanwhile, the state schools, which were less centralized and more flexibly managed than the national schools, performed better in some areas but not in others. The authors note that the state schools had only been operating for five years, and so the benefits of the alternative form of management may not have fully materialized, particularly since they performed much better than the national schools in terms of the intermediate indicators of school quality.

The Venezuelan case holds other important lessons. Parental involvement was formally introduced into

the school system in the 1970s, but had little impact as a consequence of the limited autonomy of the schools. Local communities have little incentive to organize, mobilize resources, or debate issues over which they have no control. The heavy centralization of the Ministry of Education barred anyone from effectively voicing their opinions on how the system should operate or improve unless they were organized nationally. And in Venezuela, the only national organizations with an interest in the school system were the teachers unions and the political parties.

The Venezuelan case also shows how perverse the incentives for middle managers can be in a centralized system. Since the paychecks for all 300,000 teachers in the system are issued from the central offices in Caracas, a school director who wants to discount a certain amount from a particular teachers salary because of absenteeism has to travel to the Ministry's regional office. This is so costly for school directors in distant areas that even the possibility of a financial penalty for absenteeism remains extremely remote.

The contrast between the Ministry of Education and the Fé y Alegría schools is also instructional. Both systems are "centralized" in that they have well-defined hierarchies, and centralized financing. Nevertheless, the Fé y Alegría system has clearly divided functions at each level with significant delegation of functions. The central offices focus on strategic planning and financing, while regional offices provide advice and assistance to the schools. The schools themselves are the basic unit of management activity. The school director has to develop a budget, select teachers, provide school leadership, all with wide discretion. In exchange the director is held accountable for acting within the guidelines provided by the central and regional offices. In this sense, the differences between the two systems are not so much a result of being "centralized" or "decentralized" but rather a consequence of dividing functions efficiently among the different levels and delegating significant responsibilities to the schools.[14]

In all these cases, the student test scores were higher in schools that had greater control over the use of their budgets, and in which teachers were selected and evaluated on the basis of their performance. Interestingly, the absence of job guarantees did not result in lower performance or a perception of greater insecurity. In the survey, teachers expressed much greater satisfaction in the Fé y Alegría schools, with the state school and the national schools ranked successively lower.

Studies in Health

The case studies in the health sector also demonstrate the impact of organization on performance. All three studies demonstrate the impact of payment mechanisms, consumer choice, adverse selection, and regulation upon the efficiency, quality, and cost of the different systems. They show that systems provide higher quality and more efficient medical care when consumers have greater choice and when the systems are more competitive. Prepaid insurance plans that contract with doctors and medical facilities do a better job of raising utilization rates and satisfying their clients than centralized systems which maintain doctors on fixed salaries. In each study, the public sectors' role as a regulator was criticized as deficient. In Chile and the Dominican Republic, this critique focused on the absence of

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14 For a more detailed discussion of setting aside the centralized-decentralized dichotomy and analyzing a variety of functions within social service systems, see Inter-American Development Bank (1996).

quality monitoring and mechanisms to assure financial solidarity; while in Uruguay, the government's frequent, erratic, and rigid regulation of the private prepaid systems is an important source of large inefficiencies in health care.

The existing literature on health services is quite rich in studies which discuss the impact of organization on performance, but much of it is theoretical.[15] The empirical studies have focused on segments of health services such as pharmaceuticals, hospital management, and payment mechanisms. In Latin America, discussion of health reforms in many countries has generated new studies, beginning with Chile and more recently on Colombia and Mexico.[16] The evidence is quite clear that policymakers need to think hard about the best ways to structure their health systems if progress is going to be made in improving and sustaining health conditions.

Chapter 5 studies *the Dominican Republic*, comparing the Instituto Dominicano de Seguros Sociales (IDSS) to a growing and diverse group of *Igualas* that are private prepaid medical insurance plans. The differences in organization demonstrate how the absence of incentives linked to performance in the IDSS system lead to very high costs and poor services compared to the more effective incentive structure of the *Igualas*.

The IDSS is managed centrally, financed by an obligatory 12% payroll tax, and covers a little less than 7% of the population — a group made up of formal sector employees. Managers from the maximum authority, the *Consejo*, down to the directors of hospitals are appointed centrally and are generally removed with each election cycle. Political criteria dominate in the management of the IDSS over concerns for health care and efficiency. Consequently, hospitals are maintained in provinces with too few potential patients, and utilization rates, at about 50%, are among the lowest in the region. The short horizon for political decisions leads to the hiring of new personnel in the face of strikes. Since the new personnel cannot be later dismissed, staffing expands excessively. It has reached some 48 doctors and 55 general nurses per 10,000 affiliates; for comparison, Mexico's social security system had 8.7 doctors per 10,000 affiliates in 1993.

Because care is free for everyone affiliated with social security, there is no incentive to seek attention in primary care centers. Nor do doctors or managers have any interest in controlling the use of costly hospital care since higher use provides arguments for more budgets. As a result, the hospitals are overburdened with simple consultations – at high cost – which could be more efficiently provided elsewhere in the system.

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15 Consider the literature which could be said to have started with Kenneth Arrow, "Uncertainty and the Welfare Economics of Medical Care", *American Economic Review*, 53(5), 1963; and has expanded dramatically since the 1970s, including such works as J. Newhouse, *The Economics of Medical Care*. Addison Wesley Publishing Company, 1978; R. G. Evans, "Incomplete Vertical Integration: The Distinctive Structure of the Health Care Industry", in J. van der Gaag and M. Perlman, eds. *Health, Economics, and Health Economics*, North-Holland Publishing Company, 1981; A. Enthoven, *Theory and Practice of Managed Competition in Health Care Finance*, Lectures in Economics Series, No. 9, New York: Elsevier Science, 1988; and Ellis and McGuire (1993).

16 On Chile, see Ernesto Miranda, "Descentralización y privatización del sistema de salud chileno", *Estudios Públicos*, No. 39, Centro de Estudios Públicos, Santiago de Chile, 1991 as well as Chapter 6. On Colombia, see Juan Luís Londoño de la Cuesta, "Managed Competition in the Tropics: Health Reform in Colombia", Paper presented to the International Health Economics Association, Vancouver, May, 1996. On Mexico, see Fundación Mexicana para la Salud, *Economía y salud: propuestas para el avance del sistema de salud en México*. México, 1995.

Furthermore, doctors are paid fixed salaries by IDSS, but also maintain private practices. Since their IDSS salaries are fixed and guaranteed, the doctors have a clear interest in recommending that patients see them at their private office – where they attend to the patients for a fee. Productivity for doctors, then, is very low. In 1994, the average doctor attended only 4 patients per day, and the average dentist only 1.2. The effectiveness of these visits is also extremely low. Each consultation in the IDSS system required an average of 4.3 additional visits, while in the Public Health Ministry that figure was 0.8 and in the private sector 0.5.

The poor quality of service perceived by clients is demonstrated by the fact that fewer than one-half of those who are affiliated actually make use of the IDSS services. They prefer to pay additional fees to private doctors or clinics; to pay additional premiums to private insurers; or to consult the Ministry of Health system rather than the IDSS system.

The *Igualas*, which also cover a little more than 7% of the population — also predominantly formal sector employees — represent a strong contrast to the IDSS. They are very decentralized and must seek out paying clients in order to thrive. The organizational structure of the *Igualas* varies. Some negotiate contracts with a wide range of doctors and medical facilities, while others directly contract their own doctors and maintain their own facilities. The most common structure is owned and managed by doctors, maintains a contract for services with a single hospital, and pays the doctors by a prenegotiated fee per service.

This combination gives each doctor an incentive to be very productive – the more services provided the higher their income – yet to remain conscious of costs. As a result, there are 2,248 initial consultations per 1,000 affiliates per year in the *Igualas* compared to only 837 per 1,000 in the IDSS. However, the doctors do have an interest in minimizing costs, insofar as they are shareholders and their main purpose in establishing the *Iguala* is to channel patients their way. The average hospital stay is less than 3 days for the *Igualas*, while it is 6.8 days in the IDSS. Costs per consultation are roughly half as much in the *Igualas*; and hospital treatments are less than one-third as costly.

Part of the efficiency demonstrated by the *Igualas* derives from their ability to exclude particularly high risk patients – such as those over 65 years of age or those infected with HIV. Most of the costliest procedures are also excluded from coverage. Nevertheless, the utilization rates are much higher than the IDSS; and the fact that they are growing rapidly indicates popular preference for their services. Adjusting for both these factors, then, confirms the relative efficiency and better quality of health care provided under the *Igualas*.

The *Igualas*, like the IDSS and other health care providers in the Dominican Republic, lack proper oversight and monitoring. This makes it possible for some *Igualas* to deny care – although a bad reputation can eventually affect their ability to attract and retain clients. What is most remarkable is the lack of competition among the *Igualas*. Contracts are negotiated between personnel managers of firms, on behalf of the employees, and the *Igualas*. As a result, the process is not transparent.. There is evidence that the *Igualas* have arranged tacit collusion by agreeing not to "raid" clients from their competitors.

Chapter 6, compares the three main kinds of health service providers in *Chile*, the Public Health Ministry and two kinds of private insurers called Institutos de Atencion Prepago deSalud (ISAPREs) . As a result

of the health reform in the early 1980s, Chileans who pay a tax of 7% of their wage income were given the option of having those funds applied to a private health insurance plan or to the public system under the Fondo Nacional de Salud (FONASA) which acts as a public insurer. As a result, it is possible to compare changes in the quality of care and services under different organizational structures and incentives. The organizational structure also has implications for global efficiency and equity as a result of its dualism – in which some have access to ISAPREs and others do not as a function of income and location.

The public health system is structured in ways which would be expected to lead to low efficiency. Doctors and other medical personnel are paid fixed salaries, largely unrelated to their work effort and performance.[17] Who gets what services is largely determined by government decisions regarding which facilities to expand, staff, and maintain. The system is financed by taxpayers and users through their copayments, and it faces competition for its higher income and lower-risk clients from the expanding ISAPREs. Although the system suffered a sharp decline in funding during the 1980s, the post-military governments have increased funding significantly. . Public sector spending rose from $28 per capita in 1987 to over $60 per capita in 1995 at a time when the number of public sector beneficiaries dropped by 10%. Surveys continue to demonstrate that users of public services are less satisfied than those of the private services.

The ISAPREs are private, generally for-profit, companies that develop and sell health plans to individuals or groups. Because all formal sector employees are obligated to contribute 7% of their salaries into a health plan, the amount of money this contribution represents varies from person to person according to their income. For example, a client who earns only $1,000 per month is obligated to contribute $70 per month, while a client with twice the salary contributes $140 per month. To attract both clients while remaining profitable, the ISAPREs have offered a variety of plans with different prices to accomodate these different contribution levels. The plans differ in terms of the number of options available to users as well as the levels of deductibles and copayments. Some ISAPREs are "closed" in the sense that they are attached to a particular company and exclusively cover the employees of that firm. Others are "open", that is, anyone can apply and affiliate.

The ISAPREs have much more sophisticated contracting for physicians and hospital stays than the public system. Most of them reimburse health provideres on the basis of the services provided. However, some ISAPREs have created integrated plans and are developing cost management through prospective payments and prenegotiated fees.

The open ISAPREs are subject to much greater competitive pressures than the closed ISAPREs, by the nature of they way they attract business. The two kinds of ISAPREs also vary significantly in who determines the cost and character of the health plans. These decisions generally emerge from the process of collective bargaining in the closed ISAPREs – with the firms paying a substantial amount of money into the health plans over and above the contribution from employees. On the other hand, the plans offered by open ISAPREs and chosen by individuals are the outcome of market competition and pressures since there is little evidence collusion or oligopoly profits. In fact, the concentration ratios for ISAPREs declined over the past decade as more ISAPREs entered the market and enrollments rose.

17 After 1990, Chile has begun to experiment with prospective payments to doctors in municipal health centers based on the number of users who become affiliated. To date, there have been no evaluations of that experience.

There is dramatic evidence to indicate the superior performance of the open ISAPREs. The share of the population affiliated with ISAPREs rose from under 418,000 in 1985 to more than 3.5 million in 1994. . Despite population growth, this increase has even reduced the number of people served by the public sector which declined from almost 10 million to only 9 million over the same period. The closed ISAPREs grew about 50% over this period, with approximately 190,000 affiliates in 1994. The expansion of the open ISAPREs has been attained by attracting users with services that are perceived to be better quality and by expanding the range of plans to attract successively lower income groups. Over the same time period that the costs per beneficiary in open ISAPREs rose 14%, they rose by over 80% in the closed ISAPREs and 200% in the public sector. Administrative costs were also driven down by competition – a 35% decline for the open ISAPRES compared to a 200% increase in the closed ISAPREs. The impact of incentives and competition on the cost-efficiency and quality of the open ISAPREs is strong and positive relative to the other two systems.

At the global level, the country's health system has developed in a dualistic direction – those who have sufficient income can purchase their way into the ISAPREs while others are left with only FONASA as an option. Therefore, access to particular kinds of care and options are greater for those with higher incomes. The structure also ensures that the highest risk population is covered by the public sector which is the insurer of last resort for many of the costliest procedures.

The development of the Chilean health system shows that decentralized institutions which must compete for clients can respond very effectively under a system of obligatory contributions. The ISAPREs controlled costs while providing services that attracted large inflows of clients. They also generated a variety of service packages to respond to the differing levels of contributions, thereby allowing them to reach successively lower income groups. The Chilean system also demonstrates the importance of considering the global impact of the regulatory scheme with regard to adverse selection, equity, and the distribution of risk.

Chapter 7 analyzes *Uruguay's* Institutos de Asistecia Medica Colectiva (IAMCs) which provide services to some 50% of the Uruguayan population, and shows that the structureof ownership and payment mechanisms can have important effects on the efficiency of services. The IAMCs originated in the 19th century as "*mutualistas*" -- established primarily as self-help associations serving particular occupations or ethnic groups. Over time they evolved, with the original occupational or ethnic criteria diminishing in importance, so that today the *mutualistas* act as consumer cooperatives for medical services and are selected by individuals for many different reasons. Parallel to the *mutualistas,* other IAMCs owned or controlled by doctors developed. These IAMCs are of two varieties: non-union cooperatives and union-associated cooperatives. Of the latter, the largest is the *Centro de Asistencia del Sindicato de Médicos del Uruguay* (CASMU), operated by the medical union of Montevideo. These four types of IAMCs – *mutualistas*, non-union cooperatives, union-associated cooperatives, and CASMU – represent different forms of ownership, utilize different payment schemes, and therefore face different incentives as to how they serve their clients.

In contrast to the Chilean ISAPREs and the Dominican *Igualas*, the IAMCs are heavily regulated by the government. The IAMCs are restricted both as to what services they must provide and what prices they can charge. These regulations leave little room for discretion. Furthermore, the rapidity and facility with which the government changes he rules introduces uncertainties that affect their ability to plan. Since the early 1980s, regulations have changed regarding:

C Ceilings on premiums (except for two relatively brief periods in the 1980s and 1990s)
C Restrictions on changing IAMCs (in some periods, liberalized and promoted in others)
C Minimum size (introduced in 1983-1986)
C Directors cannot be paid and technical directors (doctors) have final authority

Other regulations of longer standing which affect the IAMCs include:

C Requirement that IAMCs provide comprehensive coverage
C "Promoters" cannot be legally hired to advertise and attract new clients

What is notable is that of the various regulations, the ones related to quality of care are very poorly enforced. As a consequence, regulations which seek to protect consumers and increase their ability to select among IAMCs have had the perverse consequence of making it more difficult to judge the differences among IAMCs. Since they are unable to openly differentiate their packages and adjust their prices, the IAMCs necessarily make adjustments in the quality and effective coverage of their services. These adjustments, however, are not transparent and consumers remain uninformed of the real differences between plans.

By conducting an econometric analysis of the movement of people into and out of different IAMCs over time, and taking advantage of the small periods in which prices and copayments were liberalized, it is possible to see a number of price effects. For example, the experiment with liberalizing copayment schedules in the 1990s demonstrated strong price responsiveness in Montevideo and much less in the interior – perhaps an indication of differences in competitiveness in this period.

The chapter also shows how ownership affects service efficiency by influencing the cost structure. Since the law prohibits IAMCs from distributing profits to their owners, the medical cooperatives have higher shares of salary expenses – maximizing the income going to the owners who are the doctors themselves. The non-union cooperatives also had the highest share of subcontracted services – reserving more income from the IAMC for doctors' salaries. There was little impact on investment of the different structures because IAMCs are able to apply to the Ministry of Health for "extra premiums" to cover authorized investments. The extra premiums take the investment decision outside the current budget in which medication and equipment competes for funding against personnel and non-medical services.

As in education, the fixed salaries paid to doctors in many of the IAMCs are associated with lower output or absenteeism. However, unlike the case studies in education, this chapter has direct evidence of how doctors respond to payments which are directly linked to output, i.e. the number of consultations or services rendered. The evidence demonstrates strongly how much more work is done by doctors who receive some additional compensation from attending patients, than those for whom work is rewarded by a fixed monthly payment.

Summary

In sum, organization makes a difference. The delegation of functions, mechanisms for resource allocation, existence of competition, output measures, and monitoring entities all affect the incentives faced by service providers and the degree to which they are held accountable for performance. The new lenses provided by Theories of the Firm are tested in these studies, and demonstrate that addressing

incentive problems through better organization can improve performance. By allocating resources on the basis of outputs rather than inputs, providers receive a net benefit from serving more clients and reducing unit costs, as shown by the rapid and efficient expansion of health services in the *Igualas* and ISAPREs. Accountability for the services "purchased" in these systems can be improved by delegating authority to service providers, generating information about their performance, and giving oversight to an interested party. The organizational innovations introduced into the State schools of Brazil are clear examples of increasing accountability in this fashion, with positive results. The Fé y Alegria schools of Venezuela also share some of these advantages. The introduction of contests which encourage efficient production, generate information, and reinforce the incentive effect of resource allocation mechanisms can be seen in the Chilean education system -- although the incentives in the Municipal schools are attenuated by their softer budget constraints.

The new lenses also provide a clearer focus on the distributional implications of different forms of organization. Selection problems are clearly apparent in the health systems of Chile and the Dominican Republic, although the more recent reform in Colombia has found ways to address this issue. The Chilean education reform demonstrates how allocating resources on the basis of the number of students can equalize spending and lay the groundwork for more transparent and effectively targetted compensatory programs.

By focusing on the organization of health and education systems in Latin America, it should be possible to accelerate the rate at which educational levels and health conditions are improving. Such progress is necessary for the region to meet the challenges of the global economy and to redress the inequitable distribution of income and opportunities within the region. These studies and future ones can form the empirical foundation for this endeavor, by identifying the policies that will significantly change incentives and accountability with the goal of improving the access, quality and efficiency of health and education.

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