June 2000

29

Decentralization of Health Systems In Latin America: A Comparative Analysis of Chile, Colombia, and Bolivia

Decentralization of Health Systems in Latin America: A Comparative Study of Chile, Colombia, and Bolivia

Thomas J. Bossert, PhD
Harvard School of Public Health

June 2000

This publication was produced by the Data for Decision Making Project at the Harvard School of Public Health, funded by the U.S. Agency for International Development under Cooperative Agreement No. DPE-5991-A-00-1052-00. It was done in collaboration with the Latin America and Caribbean Health Sector Reform Initiative, funded by the U.S. Agency for International Development under Contract No. HRN-5974-C-00-5024-00. The views expressed herein are those of the author and do not necessarily reflect the views of the U.S. Agency for International Development.

TABLE OF CONTENTS

ACRONYM LIST

CHILE

FAPEM	Facturación por Atenciones Prestadas en Establecimientos Municipales (FONASA Payment Mechanism to Municipalities)
FONASA	National Health Fund
ISAPRE	Instituciones de Salud Provicionales (Private Insurance Plans)

COLOMBIA

EPS	Entidades Promotoras de Salud (Autonomous insurance and managed care organizations
ESE	Empresas Sociales del Estado (Competitive semi-public insurance organization)
ESS	Empresas Solidarias de Salud (Competitive private insurance organization)
PPE	Promotion and Prevention Expenditure

BOLIVIA

DILOS	Local Health Directorates
OTB	Organizaciones Territoriales de Base (Territorial Base Organizations)

ACKNOWLEDGMENTS

The author wishes to thank the co-authors of the separate country studies on which this synthesis report is based: Osvaldo Larrañaga, Antonio Infante, and Consuelo Espinosa in Chile; Fernando Ruiz Mier, Scarlet Escalante, Marina Cardenas, Bruno Giussani, and Katherina Capra in Bolivia; Ursula Giedion, José Jesus Arbelaez, Alvaro Lopez, and Luis Gonzalo Morales in Colombia; and Mukesh Chawla, Joel Beauvais, and Diana Bowser who supported various country projects from Harvard. He also thanks the many Chilean, Colombian, and Bolivian officials and observers who provided support through interviews and documents. In addition, the unfailing support of USAID officials, Kathleen McDonald, Karen Cavanaugh, Carol Dabbs, and Carl Abdou Rahmaan was essential to this project. He also thanks the members of the LAC Health Sector Reform Initiative Steering Committee for comments and support. The views expressed here are those of the author and do not necessarily represent the views of USAID.

INTRODUCTION

This comparative study evaluates the implementation of decentralization of health systems in three Latin American countries: Chile, Bolivia, and Colombia.

Using an innovative approach to analyzing decentralization—called the "decision-space" approach—the studies first analyzed the range (from narrow to wide) of choice that municipalities were allowed to exercise over different functions in financing, service delivery, human resources, targeting, and governance. The studies found that the "decision space" allowed local municipalities varied considerably, and changed over time. The tendency was for countries to give wider choice initially, but to reduce the decision space over time. In general, however, the choices allowed over the contracting of private services and governance decisions were wide; the space for financial allocations tended to be moderate; and only a narrow range was permitted in the case of human resources, service provision, and targeting of priority programs—all of which remained centralized. While this allowed for some significant choices, it also limited the local control over those functions most likely to effect efficiency of health services.

Within these ranges of choice, municipalities made some major innovative decisions. Although wealthier municipalities were able to assign greater portions of their own-source resources to health care in Chile and Colombia, the gap in per capita health expenditures between wealthier municipalities and poorer municipalities was narrowing, not widening, over time. In Chile the capacity of local governments to assign own-source revenues was improved by an innovative horizontal equity fund—the Municipal Common Fund—that reassigned local own-source revenues from wealthier to poorer municipalities. In Colombia and Bolivia, a percentage of intergovernmental transfers were “forced” to be assigned to health. Since these transfers were partially based on per capita formulae, the result was a more equitable per capita expenditure.

The municipalities also made choices about human resources even though these choices were more limited by restrictions on municipal decision space. Civil service rules were restrictive, but local municipalities were allowed to hire additional contract staff. In the area of service organization, municipalities innovated in a variety of areas, mainly adding new services that were not part of the basic standard package of Ministry-defined activities.

The research also found that different institutional capacities had some effect on decentralization. While institutional capacity in Bolivia was generally weak, decentralization benefited from some of the individual characteristics of mayors, and the local doctors and their relationships with the community.

In terms of the relationship between decentralization and system performance in general, the findings support the conclusion that both the die-hard detractors and the fervent advocates for decentralization are wrong. Decentralization appears to be improving some indicators of equity, such as a tendency toward similar per capita expenditures for wealthier and poorer municipalities, and to be associated with increased and more equitable per capita spending on promotion and prevention. However, except for the increase in utilization that comes with higher expenditures, the improved equity of

expenditures does not seem to be clearly related to major changes in our indicators of performance. This is not the kind of conclusion advocates or detractors like to see because it does not lend strong support for either argument. However, these studies do suggest that decentralization policies which tend toward moderate "decision space" and use mechanisms like equity funds and percentage assignments of intergovernmental transfers based on per capita formulae, may result in decentralization that at least increases equity and allocations to prevention and promotion activities, and may have other positive impacts on quality and efficiency of services.

BACKGROUND AND THEORETICAL REVIEW

In the last two decades, health sector decentralization policies have been implemented on a broad scale throughout the developing world. Decentralization, often in combination with health finance reform, has been touted as a key means of improving health sector performance and promoting social and economic development (World Bank 1993). The preliminary data from the field, however, indicate that results have been mixed, at best. In some cases, these limitations have resulted in a backlash against the reforms and an initiative for recentralization. We believe that this rejection is often premature or misplaced, and that the issue at hand is how to better adapt decentralization policies to achieve national health policy objectives. In this context, it becomes increasingly important to understand the dynamics of health sector reform processes in diverse contexts, to draw both general and case-specific lessons, and to formulate effective strategies for future research and policy making.

The term "decentralization" has been used to label a variety of reforms characterized by the transfer of fiscal, administrative, and/or political authority for planning, management, or service delivery from the central Ministry of Health (MOH) to alternate institutions. These recipient institutions may be regional or local offices of the same ministry, provincial or municipal governments, autonomous public service agencies, or private sector organizations. It has been predicted that decentralization would improve health sector performance in a number of ways, including the following: (1) improved allocative efficiency through permitting the mix of services and expenditures to be shaped by local user preferences; (2) improved production efficiency through greater cost consciousness at the local level; (3) service delivery innovation through experimentation and adaptation to local conditions; (4) improved quality, transparency, accountability, and legitimacy owing to user oversight and participation in decision-making; and (5) greater equity through distribution of resources toward traditionally marginal regions and groups. At the same time, fears have been raised about potential macroeconomic destabilization and the aggravation of interregional disparities in wealth and institutional capacity as a result of decentralization (Prud'homme 1995).

The recent proliferation of decentralization policies is part of a broader process of political, economic, and technical reform (World Bank 1998). These include the "democratization" and, perhaps more importantly, the neo-liberal "modernization" of the state. The latter movement promotes institutional and territorial decentralization as a means of introducing competition and cost-consciousness into the public sector, and develops a new role for the state in "enabling" and "steering," rather than replacing private sector activities. The promotion of cost-effective investment in primary care and outreach services, beginning with the Alma Ata Conference on Primary Health Care in 1978 and reinforced in the World Bank's *1993 World Development Report*, have provided a further technical impetus for health sector decentralization.

The range of policies grouped under the rubric of "decentralization" is quite diverse with respect to objectives, mechanisms, and effects. This report makes use of the widely accepted terminology developed by Rondinelli (1981), who identifies three principal categories of decentralization: deconcentration, delegation, and devolution.

1) *Deconcentration* is generally the most common and limited form of decentralization, and involves the transfer of functions and/or resources to the regional or local field offices of the central government agency in question. Within a deconcentrated system, authority remains within the same institution (e.g. the Ministry of Health), but is "spread out" to the territorially decentralized instances of this institution.

2) *Delegation* implies the transfer of authority, functions, and/or resources to an autonomous private, semi-public, or public institution. This institution then assumes responsibility for a range of activities or programs defined by the central government, often through the mechanism of contracting.

3) *Devolution* is the cession of sectoral functions and resources to autonomous local governments that, in some measure, then take responsibility for service delivery, administration, and finance. In the three countries that were studied in this research project, all were examples of devolution to municipal governments. In Colombia, devolution also occurred in the departmental level (similar to province or state in other sytems) and in Bolivia and Chile there was some deconcentration to regional health authorities.

METHODOLOGY & THE DECISION-SPACE APPROACH

The analytical framework used for the evaluation of these cases is based on a principal-agent approach. In this perspective, the central government, generally in the figure of the Ministry of Health, is viewed as setting the goals and parameters for health policy and programs. Through the various modes of "decentralization" described above, the central government delegates authority and resources to local agents—municipal and regional governments, deconcentrated field offices, or autonomous institutions—for the implementation of its objectives.

This approach acknowledges that the central and local governments have at least partially differing objectives. Agents often have distinct preferences with respect to the mix of activities and expenditures to be undertaken, and respond to a differing set of stakeholders and constituents than national-level principals. Local institutions, therefore, may have incentives to evade the mandates established by the central government. Moreover, because agents have better information about their own activities than does the principal, they have some margin within which to "shirk" centrally-defined responsibilities and pursue their own agendas. The cost to the principal of overcoming this information asymmetry is often prohibitively high. Within this context, the central government seeks to achieve its objectives through the establishment of incentives and sanctions that effectively guide agent behavior without imposing unacceptable losses in efficiency and innovation. Diverse mechanisms are employed to this end, including monitoring, reporting, inspections, performance reviews, contracts, grants, etc.

The process of decentralization may be seen as one of selectively broadening the "decision-space" or range of choice of local agents, within the various spheres of policy, management, finance, and governance (Bossert 1998). The central principal voluntarily transfers formal authority to the agent in question in order to promote its health policy objectives. The degree and nature of this transfer differs case by case,

and shapes the function of the principal-agent relationship and the decentralized system as a whole. The three case studies that this synthesis report draws on do not seek to quantify formal decision-space, but rather to offer a preliminary characterization of its range—narrow, moderate, or broad—within an array of health system functions. The nature and extent of decision-space is presented through "maps," similar to the one presented below. The decision-space maps are complemented by an analysis of the history and context of decentralization reforms.

Figure 1. Standard Decision-Space Map

FUNCTION	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
Finance			
SOURCES OF REVENUE	⇒	⇒	⇒
ALLOCATION OF EXPENDITURES	⇒	⇒	⇒
INCOME FROM FEES & CONTRACTS	⇒	⇒	⇒
Service Organization			
HOSPITAL AUTONOMY	⇒	⇒	⇒
INSURANCE PLANS	⇒	⇒	⇒
PAYMENT MECHANISMS	⇒	⇒	⇒
REQUIRED PROGRAMS/NORMS	⇒	⇒	⇒
CONTRACTS WITH PRIVATE PROVIDERS	⇒	⇒	⇒
Human resources			
SALARIES	⇒	⇒	⇒
CONTRACTS	⇒	⇒	⇒
CIVIL SERVICE	⇒	⇒	⇒
Access rules			
TARGETING	⇒	⇒	⇒
Governance Rules			
LOCAL GOVERNMENT			
FACILITY BOARDS	⇒	⇒	⇒
HEALTH OFFICES	⇒	⇒	⇒
COMMUNITY PARTICIPATION	⇒	⇒	⇒

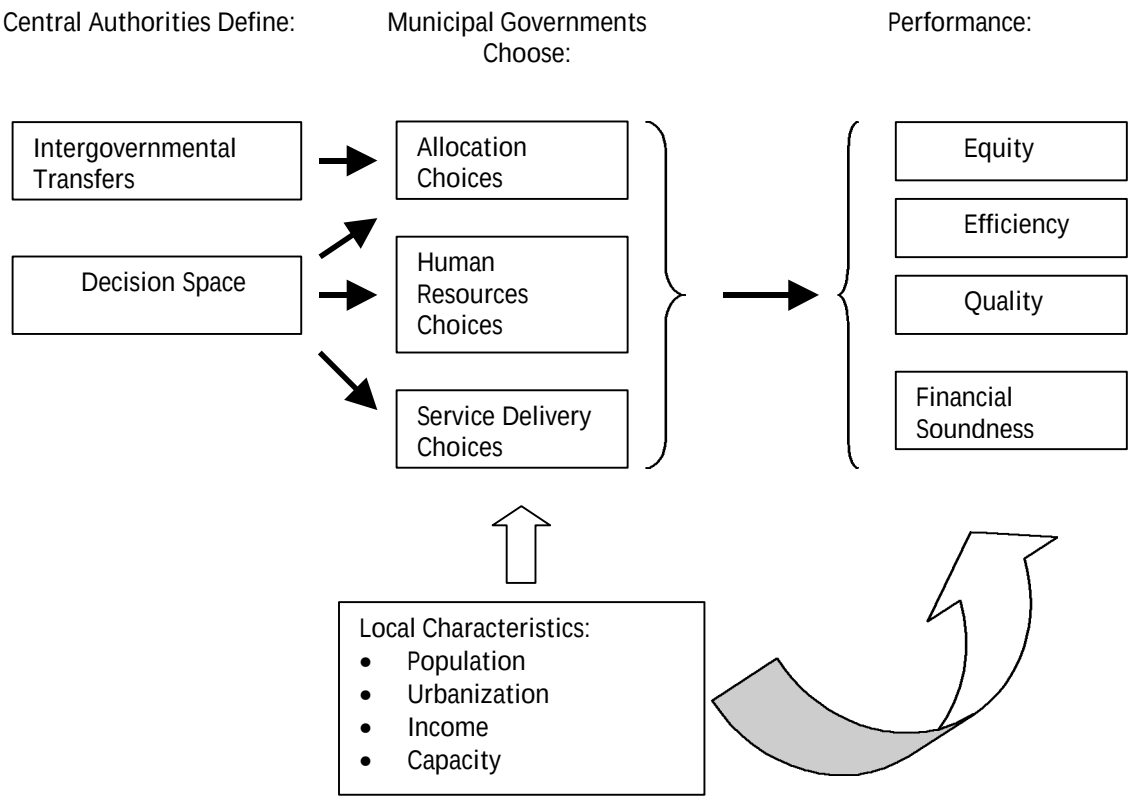
There are other channels of control that the central government has at its disposal to shape or override local decisions. The central government may offer incentives to local decision-makers to encourage them to make choices in favor of national priorities. These incentives can be in the form of matching grants in which the national government will provide funding for a priority activity if the local government will provide counter-part funding and implement the activity. Incentives can also take the form of guidelines—for instance, model fee schedules—and other forms of technical assistance to upgrade local capacity and to influence local decisions. They may also come in the form of specific training and skill development in the areas that would strengthen central priorities. There may also be mechanisms for special recognition of

achievements in priority areas—such as competitions for highest immunization rates among municipalities. Finally, the central government can simply provide services that are centrally directed and funded—such as continuing to provide malaria control programs and vaccination campaigns.

Once the range of choice allowed at the local level is established, the next question is: what choices do local governments make? This part of analysis is based on an examination of the allocation choices that are made at the local level in response to choices allowed over central government transfers and with own-source revenues. This includes what choices are made about human resources at the local level and the choices made about service delivery and coordination among local governments.

The research was based on the expectation that different characteristics of the municipalities would influence the choices made and the performance of the health care system. The analysis examines how the income of municipalities shapes allocation decisions, other choices, and performance. In addition, population size, urbanization, relationships among major stakeholders, and institutional capacity might influence both choice and performance.

Figure 2. Research Model



A central question, however, is how do the different choices allowed at the peripheral level affect the overall performance of the system. We often expect health sector reforms to produce improvements in equity, efficiency, quality, and financial soundness of the health system (Bossert, 1998). Therefore, it is important to assess how decentralization as implemented in Chile, Colombia, and Bolivia has affected system performance along these dimensions.

This report presents a synthesis of the country studies of health sector decentralization in Chile, Colombia, and Bolivia. Each country study involved the establishment of a local team of highly qualified researchers.[1] These teams first analyzed national data on municipal characteristics, expenditures, and performance. Although national-level data were available for all three countries, the quality of the data in Bolivia limited its use in the comparative analysis.[2]

In Chile and Bolivia, field studies of municipalities were conducted to gather qualitative information. In Colombia, due to security concerns, no field studies were conducted specifically for this project, although previously published field studies were reviewed and incorporated into the analysis as appropriate. The national case studies were focused on the municipal level because all three countries devolved power to this level, which facilitated inter-country comparisons. While the three country teams used the same analytic framework, the availability and quality of the data varied from country to country as did the structures of decentralization. This created situations in which it was impossible to use uniform methodologies.

We sought to evaluate several closely related dimensions of decentralization policies. First, the range of choice allowed to municipalities in each of the three countries was defined and the changes in this range over time were documented, using the decision-space mapping described above. The major issue was to show how decentralization has allowed different ranges of choice over various critical functions. Interestingly, there was a general tendency toward moderate choice on all but human resource decisions that tended to be narrow.

Second, allocation choices made by both the center and the municipal governments were examined as well as the interactions among those choices. In particular, the research tested a major hypothesis from the literature on decentralization, which posits that decentralization increases inequality because it allows richer municipalities to put more resources into health than poorer municipalities. We also examined the question of "fiscal laziness;" i.e., whether the provision of central funds through intergovernmental transfers is a disincentive for municipalities to put their own resources into health. Then we reviewed other innovations that local governments made during the period of decentralization.

[1] The country teams were: for Chile, Osvaldo Larrañaga and Antonio Infante; for Colombia, Ursula Giedion, Jose Jesus Arbelaez, Alvaro Lopez, and Luis Gonzalo Morales; and for Bolivia, Fernando Ruiz Mier, Scarlet Escalante, Marina Cardenas, Bruno Giussani, and Katherina Capra.

[2] There were high levels of missing data throughout the Bolivian data set. Less than half the municipalities reported in 1994 and less than two-thirds in the following years. There were only three provinces with relatively complete data—Chuquisaca, Santa Cruz, and Potosi. Thus, the set is biased toward those relatively unusual provinces, which are not representative of the nation.

Third, we examined choices about human resources to assess whether local governments under decentralization have been able to make more effective and efficient use of their human resources. Advocates of decentralization suggest that local decision makers will have a better idea of what is needed in the local situation and will be able to make the kinds of management choices that address these needs. Critics of decentralization suggest that local choice will lead to patronage and inefficient use of local human resources.

Throughout the analysis, we have attempted to assess local conditions that might influence local choice and performance such as size of population, urbanization, municipal income, and institutional capacity. It is sometimes argued that larger, more urban, higher-income municipalities will have better capacities, more skilled workforces, and more resources to make better choices and have better performance. Some of these hypotheses are tested with the data gathered in the research.

Indicators of performance were limited due to limitations of the data available. The original intention was to assess indicators of equity, efficiency, quality, and financial soundness in all three countries. We had data on utilization for both Colombia and Chile and used some indirect indicators of efficiency in all three countries, which was to have been the centerpiece of the analysis. One of our major concerns has been to assess whether decentralization has improved system performance. We do present what data are available, which suggests that decentralization may have resulted in greater equity in per capita expenditures and, in turn, increases in equity of utilization. However, overall it is not clear that decentralization has made a major difference in system performance. This indeed may be an important conclusion from the study.

STRUCTURE AND PROCESS OF DECENTRALIZATION IN CHILE, COLOMBIA, AND BOLIVIA

This section provides a brief review of the characteristics and process of decentralization in each of the countries studied in order to clarify the unique aspects of each system. A fuller description of each country experience is available in the separate country reports.

CHILE

Chile is the first country in Latin America to initiate a major effort to decentralize its health system. Beginning in the early 1980s the Pinochet military government initiated a program to devolve ownership, authority, and responsibility over primary care clinics to the 308 municipal governments in the country. Hospitals remained under the control of the regional offices of the Ministry of Health, which were also responsible for supervising the municipal services and assuring that the technical norms of the Ministry were being met. The health care staff was also transferred to the municipal system, which undermined their protections under national civil service rules.

The system was paid for through a central government fund, FONASA, which provided funds initially based on a nationally defined fee-for-service system, FAPEM (Facturación por Atenciones Prestadas en Establecimientos Municipales). This led to an explosion in expenditures and this mechanism was later capped at near historical budgets that were negotiated between the municipalities and the central fund. The municipal primary health care system receives approximately 30% of public health care funds in over 1,500 clinics and health posts (Carciofi et al. 1996). Local governments were expected to contribute some of their own-source revenues to support this system. To assist poorer municipalities assume these responsibilities, Chile implemented an unusual horizontal equity fund, called the Municipal Common Fund, which redistributed a portion of the own-source revenues of wealthier municipalities to the poorer municipalities.

The implementation of decentralization was in several stages through the 1980s and was fully in place when democratic government was restored in 1989. The process of decentralization was implemented at the same time as a parallel process of reform of the social insurance system. This reform encouraged the creation of private insurance plans (ISAPRE) and an expansion of private provision by allowing wealthier contributors to the social insurance system to take their contributions out of the public system. Other than excluding the enrollees of ISAPRE from access to the public system—a provision difficult to enforce—this insurance reform had little impact on the decentralization process.

Democratic governments after 1989 put significant new resources into the public health system and by 1996, unions of health workers and professional associations had been able to pass a new Statute of Primary Care Workers that restored many of the benefits and salary rules of the civil service system.

COLOMBIA

In Colombia the process of decentralization of the health sector was initiated in the 1991 Constitution and elaborated in a series of laws (Law 10, Law 60, and Law 100). The process involved devolution of health facilities, personnel and responsibilities to the 32 "departments" (equivalent to provinces or states in other systems) and 1,070 municipalities. Municipalities were assigned responsibility for prevention and promotion, primary care facilities, and first-level hospitals. Departments gained control over secondary and tertiary care facilities, teaching hospitals, and major public health campaigns. The local authorities had to qualify on a series of criteria, including establishing a separate health fund, pensions, and demonstrated planning capacity, in order to be certified to assume control over the major source of intergovernmental transfers—the *Situado Fiscal*. Municipalities however, received a separate transfer—the "municipal participation," which had earmarks for health and education—and so had some separate funding to assign to health even before being certified by the Ministry of Health. Certification, however, granted significantly greater control over several functions as will be seen below in the analysis of "decision space." Certification was implemented slowly at first. In 1994, only 19 municipalities had been certified, with only eight more added in 1995. However, in 1996 and 1997, almost 300 municipalities— nearly a third of the total—were certified.

As in Chile, the decentralization process was accompanied by major reform in social insurance. However, in Colombia the insurance reform had a direct impact on the decentralization process. The reform created competitive public and private insurance organizations (EPS and ESS), which were to receive a risk adjusted premium for covering the poor. Funding for these insurance entities was to be reassigned from the S*ituado Fiscal* funding transferred to the municipalities in a phased process. Municipalities have resisted this loss of control, but have partially complied.

As of 1996, Colombia spent approximately 10% of its GDP on health, including 4% on the public sector and 6% on the private sector. Of public expenditures on health, 39% were made at the national level, 45% at the departmental level, 9% by the municipalities, and the remaining 7% by special entities such as the armed forces and ECOPETROL. The evolution of sub-national government revenues from transfers is presented in the table below.

Table 1. Central Transfers to Municipal and Departmental Governments as a Percentage of Total Government Revenues

TRANSFER	1990	1991	1992	1993	1994	1995	1996	1997
SITUADO FISCAL	21.1	48.5	19.1	20.1	22.1	22.8	23.8	23.8
MUNICIPAL PARTICIPATION	10.4	10.0	12.4	12.8	13.0	14.6	15.7	16.7
COFINANCING	6.9	6.2	6.0	4.5	5.3	7.1	8.6	8.2
ROYALTIES AND NATIONAL ROYALTY FUND	5.8	3.6	3.4	3.2	3.9	4.1	3.4	3.5
TOTAL	44.1	38.3	40.8	40.6	44.3	48.7	51.5	52.3

From Vargas and Sarmiento (1997): p. 20.

BOLIVIA

The decentralization of health in Bolivia was initiated by the specific Law of Popular Participation (1994), that devolved control over what had been the regional development "investment and supply" budget to municipalities, while retaining control over personnel and salaries at the regional offices of the Ministry of Health. This law, in fact, created over three-quarters of the 311 municipalities and the first elections were held in 1995. The law also created Territorial Base Organizations (OTB), which included indigneous and peasant NGOs, neighborhood organizations, and other organizations. The OTB were designed to allow grassroots participation in local government through Oversight Committees. To coordinate between municipalities, OTB, and the local health professionals, a new organization, the Local Heath Directorate (DILOS), was formed, which included the local health official, and representatives of the municipality and the OTB.

Initially the municipalities were allowed to assign the intergovernmental transfer (called "co-participation") to any of a selected list of social sector activities with no restriction on the amount assigned to each. They were to coordinate planning with the regional authorities of the central ministries, but these authorities had little control over the final allocations.

In 1996, after it became apparent that many municipalities were not assigning any funding to health, a Law of Maternal and Child Insurance specifically earmarked 3% of the "co-participation" funds to support supplies and equipment for a basic benefits package for mothers and children. The benefits package was to be offered free of charge, which was a significant restriction, since even before decentralization, facilities were allowed to set and retain their own fees.

Overall, social investment as a percentage of GNP more than doubled between 1993 and 1995, increasing from 1.72% to 3.61%. Moreover, the governmental level at which this expenditure is made has also changed considerably. In 1993, municipal governments controlled only 15% of social investment in Bolivia. By 1996, this proportion had increased to more than 40%, including over 60% of all infrastructure investment in health, education, and basic sanitation, while the central government's share of social investment decreased to 11% (Gray Molina 1996). Finally, the investment priorities of different types of municipalities also vary considerably. For instance, with respect to health, the capital cities invested US$ 0.73 per capita, while other municipalities invested US$ 1.70, nearly two and a half times as much (ibid.).

COMPARISON OF DECISION-SPACE IN CHILE, COLOMBIA, AND BOLIVIA

The methodology used in the research suggests that the range of choice over different functions that the decentralization process allowed to local governments is an important way to define decentralization. This allows us to compare the experience of decentralization among countries, which demonstrated that the three countries assigned different ranges of choice over different functions.

COMPARATIVE ANALYSIS

The following section presents the formal decision space of all three countries in comparative perspective. Since in each country the decision-space map for municipalities changed during the period of study, we present two comparative maps. The map in Figure 3 compares the decision space of the three countries at the time of the *widest range* of choice that was allowed to municipalities. Figure 4 compares maps of the three countries for the decision space that allowed the *narrowest range* of choice. Annex 1 presents the details of the country maps in each instance. These maps are derived from country-specific maps developed for each country study. The country maps were derived from a review of laws and practice in each country and are based on the combined judgement of the country research teams and the author. While there are general criteria for judging these ranges of choice (see Annex 4), there is significant room for judgement in each individual country case. There is no easy method to deal with the subjectivity of this exercise—even a panel of expert judges with detailed knowledge of all three cases would be hard to establish. Therefore, these tables should be taken as indicative and subjective, and not as quantitative, objective measures.

These decision-space maps show some similarities as well as significant differences among the three countries. First, there is in general only a moderate range of choice allowed to local municipalities. No municipalities had a full range of choice over key functions of finance and human resources. Significant restrictions remained under the control of the central government. It is important to note that there was a tendency over time to narrow the choice over key functions in all three countries. In Chile, for example, the initial wide choice over human resources was later restricted by the Statute of Primary Health Care Workers. In Colombia, the initial choice allowed by Law 60 was restricted by Law 100 which assigned a fixed percentage of local funding to insurance plans.[3] In Bolivia, the introduction of the *Seguro Materno Infantil* earmarked a percentage of local funding for specific expenditures and reduced choice over fee collection. These shifts focused on the major areas of control—allocation of expenditure and human resources. In the case of restrictions on human resources in Chile, this was the result of political pressure by health professionals. In the cases of

[3] The tables here do not show this change over time for Colombia. They show the increase in decision space over time that is afforded by municipalities becoming certified. Colombia was the only case where it was possible to assess the impact of a change in municipal status.

restricting choice on expenditures, the initiatives were from the Ministries of Health attempting to force local governments to allocate funding to national priorities.

Figure 3. Comparative Decision Space at Widest Ranges of Choice

FUNCTIONS	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
FINANCE			
SOURCES OF REVENUE		COLOMBIA CHILE	BOLIVIA
EXPENDITURES		COLOMBIA BOLIVIA	CHILE
INCOME FROM FEES	CHILE	COLOMBIA BOLIVIA	
SERVICE ORGANIZATION			
HOSPITAL AUTONOMY	COLOMBIA CHILE	BOLIVIA	
INSURANCE PLANS	COLOMBIA CHILE BOLIVIA		
PAYMENT MECHANISMS		COLOMBIA BOLIVIA	CHILE
REQUIRED PROGRAMS & NORMS	COLOMBIA CHILE	BOLIVIA	
HUMAN RESOURCES			
SALARIES	COLOMBIA BOLIVIA		CHILE
CONTRACTS		COLOMBIA BOLIVIA	CHILE
CIVIL SERVICE	COLOMBIA BOLIVIA		CHILE
ACCESS RULES			
TARGETING	COLOMBIA CHILE	BOLIVIA	
GOVERNANCE RULES			
LOCAL GOVERNMENT	CHILE		COLOMBIA BOLIVIA
FACILITY BOARDS	COLOMBIA BOLIVIA	CHILE	
HEALTH OFFICES	COLOMBIA BOLIVIA	CHILE	
COMMUNITY PARTICIPATION	BOLIVIA		COLOMBIA CHILE
TOTAL DECISION SPACES IN A GIVEN RANGE: COLOMBIA **CHILE** **BOLIVIA**	8 6 6	5 4 6	2 5 3

Colombian municipalities after certification
Chilean municipalities before Human Resources Statute
Bolivian municipalities before Maternal and Child Insurance Law

Figure 4. Comparative Decision Space at Narrowest Ranges of Choice

FUNCTIONS	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
FINANCE			
SOURCES OF REVENUE	COLOMBIA	CHILE BOLIVIA	
EXPENDITURES	COLOMBIA	CHILE BOLIVIA	
INCOME FROM FEES	CHILE BOLIVIA	COLOMBIA	
SERVICE ORGANIZATION			
HOSPITAL AUTONOMY	COLOMBIA CHILE	BOLIVIA	
INSURANCE PLANS	COLOMBIA CHILE BOLIVIA		
PAYMENT MECHANISMS	COLOMBIA	CHILE BOLIVIA	
REQUIRED PROGRAMS & NORMS	COLOMBIA CHILE BOLIVIA		
HUMAN RESOURCES			
SALARIES	COLOMBIA CHILE BOLIVIA		
CONTRACTS		COLOMBIA BOLIVIA	CHILE
CIVIL SERVICE	COLOMBIA CHILE BOLIVIA		
ACCESS RULES			
TARGETING	COLOMBIA CHILE BOLIVIA		
GOVERNANCE RULES			
LOCAL GOVERNMENT			COLOMBIA CHILE BOLIVIA
FACILITY BOARDS	COLOMBIA BOLIVIA	CHILE	
HEALTH OFFICES	COLOMBIA BOLIVIA	CHILE	
COMMUNITY PARTICIPATION	BOLIVIA		COLOMBIA CHILE
TOTAL DECISION SPACES IN A GIVEN RANGE: COLOMBIA **CHILE** **BOLIVIA**	11 7 9	2 5 5	2 3 1

Colombian municipalities before certification
Chilean municipalities after Human Resources Statute
Bolivian municipalities after Maternal and Child Insurance Law

FINANCE DECISION SPACE

The finance functions are of particular importance in decentralization. The choice to control revenues allocated to the health sector , expenditures within the health sector, and to set and retain fees are major instruments of local control. The control of revenues is a major means by which local governments can exercise their choice over whether health is a priority compared to other local activities like education, civic facilities, and roads. It is also a means by which wealthier communities can assign more resources than poorer communities, thus contributing to inequities in ways that centralized allocations may not.

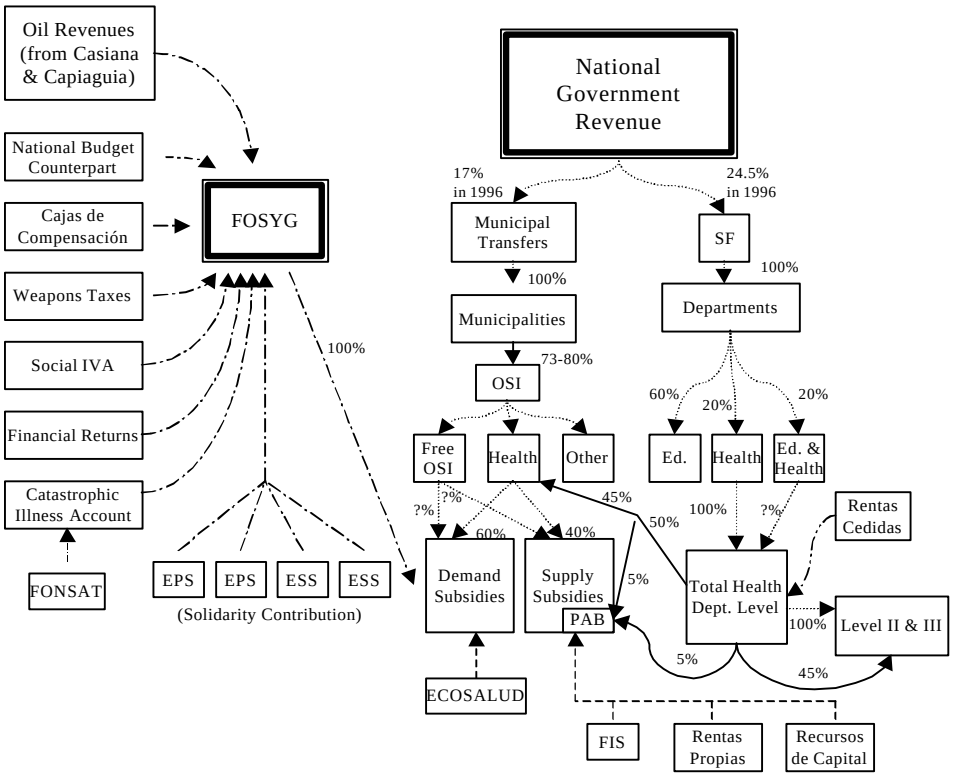
This choice was quite wide in Bolivia after the passage of the Popular Participation Law that allowed municipalities to assign a wide range of their intergovernmental transfers to health (0-60%). This choice was later restricted by the Maternal and Child Health Insurance Law, which earmarked 3% of these funds specifically to supplies and equipment for the benefits package for mothers and children.

In Chile, allocations to the health sector were formally made by a fee-for-service tariff set by the central authorities. But there was a ceiling to these fees—usually exceeded by utilization—and that ceiling was set by informal negotiations between municipalities and the Ministry of Health. This negotiation gave the local authorities some degree of influence over this source of funding. In addition, local municipalities were freely allowed freely to assign their own-source revenues to health.[4]

In Colombia, the municipalities received two sources of intergovernmental transfers, a municipal direct transfer and a transfer through the Departments (*Situado Fiscal*). Both of these transfers had percentage ranges that were earmarked to health (see Figure 5). The municipalities had some choice within the percentage ranges and they could assign their own-source revenues to health.

[4] In Chile, wealthier municipalities had to assign a significant portion of their revenues to a horizontal equalization fund (Municipal Common Fund) that reduced their choice over assignment of own-source revenues. This fund will be discussed in more detail in later sections of this report.

Figure 5. Financial Flows: Colombia's Health Sector



KEY

SF = Situado Fiscal
Ed. = Education
PAB = Plan de Atención Básica
OSI = Obligatory Social Investment
FOSYGA = Fondo de Seguridad y Garantía
FIS = Fondo de Inversión Social

= Direct Government Transfer
= Gov't revenue allocated to Situado Fiscal
= Revenue from earmarked taxes (rentas cedidas)
= Revenue from other sources

Choices about expenditures in the health budget are also an important part of decentralization. Managing health expenditures can allow local managers to make choices that respond to local conditions and preferences. It may also allow for more technically efficient choices, since local managers may know more about local staff, local input markets, and other factors. Chile initially granted local municipal authorities the widest choice on this function, however, this choice was restricted later by requiring expenditures to cover staff that were protected by the new Human Resources Statute. Bolivia allowed municipalities to assign health resources within a wide percentage range, but later restricted this choice through the earmarked assignment of health funds to the maternal and child benefits package. In Colombia, certification granted municipalities control of expenditures, which was lacking in non-certified municipalities. Department authorities controlled most expenditures in uncertified municipalities. In all three countries, local own-source revenues assigned to health could be expended without central restrictions.

Control over setting and retaining fees is also an important financing function. It is often argued that retention of fees at local levels increases the incentives for local managers to collect fees and to be more responsive to consumer demand. Control over setting fees also allows local managers to be more responsive to local market conditions. Bolivia and Colombia had a moderate range of choice over fees—either by an explicit range or by the requirement that Ministry of Health approve local fee schedules. However, in Bolivia this changed when the Maternal and Child Insurance required that the basic package of services be provided free of charge. Chile required that all primary health care services be provided free of charge.

SERVICE ORGANIZATION DECISION SPACE

The ability of local governments to allow their facilities a significant degree of autonomy could be an important means for local governments to improve technical efficiency and quality through more flexible hospital management. In Chile and Colombia, this choice was not made at the local government level, but rather determined by national policy. In Chile, the hospitals were not devolved to municipal governments; therefore, the municipalities had no choice over their organization. In Colombia, national policy required the creation of autonomous public entities (ESE) and offered municipalities little choice over this decision. In Bolivia, local hospitals were granted different degrees of autonomy by the local authorities, with little guidance from the national government.

In some countries outside the sample studied in this project—such as the Philippines—local governments are allowed to create or sponsor social insurance schemes. In none of the LAC cases studied was this authority allowed at the municipal level.

Another tool of local management for manipulating local incentives is the ability to determine the means of payment to local providers. In Chile, municipalities were first allowed to pay their staffs and contractors by any means allowed under the commercial code, until the Human Resources Statute restored the salary mechanism for primary care personnel. In Colombia, certified municipalities are allowed to pay salaries and bonuses, although this choice is restricted by union agreements at the national level. In Bolivia, the municipalities did not have jurisdiction over civil service salaries and

were not expected to provide bonuses. They did have authority, however, to pay contract workers under the municipal code.

A major tool used by the central authorities to control local choice is the ability of the Ministry of Health to define the norms and standards of service and of special programs. These norms can be quite general sets of priorities or they can specify assignment of personnel, infrastructure, equipment, and supplies to specific tasks and priorities. In Chile and Colombia, the Ministry exercised considerable control through well-defined and detailed norms and standards. In Bolivia, the Ministry's inability to disseminate and enforce norms and standards limited its ability to control local choice, initially allowing a greater range of choice in that country. However, with the implementation of the Maternal and Child Health Insurance, there was an effort to define and disseminate more standards in Bolivia, thereby restricting local choice.

HUMAN RESOURCE DECISION SPACE

Local control over human resources may be a major means of improving the technical efficiency and quality of service. If local managers have more control over their staff, through the provision of appropriate incentives and the power to hire and fire staff, they may be able to improve the services considerably. This capacity, however, may be undermined by local pressures to provide patronage employment, rather than hire the most qualified staff. Chile initially allowed the greatest range of municipal choice over determining salaries and removed the primary health care staff from national civil service protections. This choice was severely restricted by the Human Resources Statute, which re-established many of the civil service protections and restored a nationally-defined salary range. In Bolivia and Colombia, local governments were given no control over local salaries or civil service staffing. Salaries, hiring, and firing were controlled by higher authorities. However, in all three countries, municipal governments could contract additional health staff, with some restrictions.

ACCESS RULES AND LOCAL GOVERNANCE DECISION SPACE

Access rules for targeting might affect how local authorities assign resources to the poor in their communities. If they are allowed significant choice on this, some communities might innovate and find new means of targeting the poor, while others might make no effort to target their resources toward the poor and needy. While Bolivia granted moderate choice over local targeting before the Maternal and Child Health Insurance, this act specifically targeted local resources to mothers and children. In Chile and Colombia, national policies established access and targeting, and local governments had no choice in the matter.

Local governance is also a means of assessing the range of local influence on health systems. If local governments are elected there is a greater potential for local choices to be in concert with local popular preferences. In Chile, the local mayors were initially appointed by the military government. However, after 1989, mayors were elected as they were throughout the study period in Colombia and Bolivia. Local authorities also

had some choice in Chile over how to organize their local health administration and local facility boards and there were three organizational options from which a municipality could choose. However, in Bolivia and Colombia, the organizational requirements for these governance instances were defined by national law.

Choice about community participation was left to the municipalities in Colombia and Chile. In Bolivia, the Law of Popular Participation defined an active role for the community organizations (OTB and NGOs) without allowing municipal choice over the forms.

OVERALL COMPARISONS

The figures above have attempted provide a rough ranking of the ranges of choice by country. As noted, the ranges of choice for each country are somewhat subjective and should be interpreted with caution. In addition, the functions might require weighting for different priority issues; for instance, for questions of efficiency we might want to weight the financing and human resource functions as more important than targeting, and for equity we might be more concerned with targeting and community participation. These rankings then are only to be taken as general indicators of the country differences and should not be seen as quantitative measures.

Figure 3 shows that at the widest range of choice, Chilean municipalities had the greatest number of functions with wide decision space and Chile and Bolivia had an equal number of functions with moderate and wide decision space. Colombian municipalities had the lowest number of functions with moderate or wide decision space. However, since the Chilean and Bolivian decision space was reduced over time, and the number of certified municipalities grows significantly over time in Colombia, by the end of the research period, all three countries had roughly similar ranges of total decision space as seen below in Table 2.

Table 2. Comparative Total Decision Space at End of Research Period

LATEST DECISION SPACE			
Colombia	8	6	2
Chile	7	6	3
Bolivia	9	6	1

There is a general logic to having a moderate degree of choice over major functions like allocation of funding and contracting, wider choice over governance, while control over human resources remains quite constricted by law or union agreements. Democracy and some control of financing are key elements of local accountability. At the same time, norms, targeting, and human resources remain relatively tightly controlled at the center. As long as the health providers are able to organize through unions and political interest groups, they are likely to defend restrictions that limit local choice. Ministries of Health, even if they are shifting from an operational to a policy role, are likely to want to retain control over the norms of the system. National mechanisms for targeting the poor are also usually important central functions, even in federal systems.

CHOICES AND INNOVATIONS

What did the local governments do with this range of choice allowed by the decentralization laws? This section examines the choices made about allocating funds to health services, the choices about human resources, and other innovations in health services that followed decentralization.

ALLOCATION DECISIONS

One of the most important critiques of decentralization has been that by allowing local governments to allocate their own resources to basic social services it encourages growing inequalities (Prud'homme, 1995). Richer municipalities should be able to put more resources into the health sector than poorer communities can. This would lead to greater inequalities among municipalities over time when a centralized system decentralizes. One of the ways that central governments can compensate for this tendency is to allocate intergovernmental transfers in favor of the poorer communities—granting higher per capita centrally-controlled funds to those municipalities least able to provide their own funding. One of the problems, however, with these adjusted intergovernmental transfers, is that they also may encourage municipalities to be "fiscally lazy," using intergovernmental transfers as a substitute for locally-generated funds. The studies of Chile and Colombia allowed us to examine some of these issues. In Bolivia, the financial data available did not allow us to say much about allocation decisions.

Per Capita Health Expenditures

In Chile, confirming earlier research, it is indeed the case that richer municipalities assigned higher per capita funding to health than did poorer municipalities.[5] However, on deeper analysis it was only the very wealthiest municipalities that were significantly different—ninety percent of the municipalities spent approximately the same amount per capita as shown in Table 3. While the central government contribution was relatively similar for all income deciles, the decile with the wealthiest municipalities contributed four times as much per capita than the others. As we will see below, the ability of poorer municipalities to provide sufficient funding for their local contribution is a function of an innovative equalization fund, the Municipal Common Fund.

It is not clear whether this situation was simply an inheritance from the period prior to decentralization when it is likely that facilities and staffing were historically established and thus, when the richer municipalities assumed responsibility for financing these services, it would have been hard not to continue to support.

[5] Carciofi et al. (1996), Larrañaga (1996), and Duarte (1995) all concur in this conclusion.

Table 3. Chile: Expenditures on Primary Municipal Health Care per Beneficiary (1996)*

DECILES	TOTAL EXPENDITURE	CENTRAL GOVERNMENT CONTRIBUTION	LOCAL CONTRIBUTION
1 (POOREST)	14,479.5	10,570.9	3,681.6
2	12,160.8	9,219.7	2,748.1
3	12,205.0	8,701.8	3,543.9
4	12,678.5	9,241.7	3,325.9
5	11,608.2	8,303.1	3,221.5
6	12,286.3	8,178.3	3,754.6
7	13,826.3	9,598.2	3,889.8
8	11,677.5	8,367.7	3,158.2
9	12,231.0	8,638.7	3,121.4
10 (RICHEST)	23,496.0	9,479.2	12,808.8

Source: Prepared based on Subdere information
*Note: Averages by deciles of municipal income

However, it is interesting to note, counter to the charge of many opponents of decentralization, that this inequitable situation was in fact narrowing over time. The data in Table 4 below show that the gap in total expenditures per capita from the wealthiest to the poorest, which was 2.2 times in 1991, was reduced to 1.6 times in 1996.

Table 4. Chile: Expenditures in Municipal Primary Health Care per Capita (1991 and 1996)

DECILES	1991	1996	INDEX 91	INDEX 96
1 POOREST	6,380.93	14,479.9	100.0	100.0
2	5,975.59	12,160.8	93.7	84.0
3	5,720.30	12,205.0	89.7	84.3
4	4,787.16	12,678.5	75.0	87.6
5	5,413.89	11,608.2	84.8	80.2
6	5,408.82	12,286.3	84.8	84.9
7	6,819.40	13,826.3	106.9	95.5
8	5,653.75	11,677.5	88.6	80.7
9	6,817.58	12,231.0	106.9	84.5
10 RICHEST	13,977.76	23,496.0	219.1	162.8

Source: Prepared based on Subdere information
Note: Ordered by deciles of per capita income 1996

In Colombia, we found a similar dynamic , although there were some revealing differences. Table 5 shows central governmental transfers (external) and own-source revenues by income decile, adjusted according to the consumer price index for 1997. The central governmental transfers, which were assigned by central level application of a somewhat flexible formula based on population, and not influenced by local choice. Unlike the case in Chile, the central government assignment to health, at least in the first years of decentralization, was not uniform. The difference between the central allocation to the richest decile was six times higher than that of the poorest in 1994. Compounding the inequalities, richer local governments also put in significantly higher

funding—42 times more than the poorest. In 1995, the situation worsened and the richer municipalities put in 70 times more. However, by 1997 both trends had reversed. Central governmental transfers became much more uniform, as in Chile, although still not progressively compensating the poor. Also, the gap in own-source contributions to health as measured by the ratio between richest and poorest municipalities narrowed from 70 to 12 by 1997.[6]

Table 5. Colombia: Average External and Own-Source Revenues per Capita by Income Decile

DECILES	1994		1995		1996		1997	
	EXTERNAL	OWN	EXTERNAL	OWN	EXTERNAL	OWN	EXTERNAL	OWN
1 POOR	7.1	0.2	10.9	0.2	22.4	0.9	54.6	2.1
2	10.7	0.5	12.0	0.8	22.8	1.2	56.2	2.9
3	10.5	1.2	15.3	1.4	25.4	3.2	59.1	7.1
4	14.8	2.2	19.4	2.4	26.6	4.7	54.4	9.6
5	16.9	2.6	24.3	4.3	28.8	7.6	62.4	13.9
6	28.1	4.1	27.1	6.0	38.0	12.8	60.0	18.1
7	24.5	4.1	36.0	7.9	47.2	14.7	67.3	20.3
8	25.7	4.1	41.6	8.0	45.8	13.4	67.3	21.2
9	37.8	6.7	52.4	10.0	56.0	18.1	64.7	23.4
10 RICH	43.4	8.3	58.7	14.0	52.7	21.2	64.6	25.0
AVGERAGE	21.9	3.4	29.7	5.4	36.6	9.8	61.1	14.4
10TH/1ST	6.11	41.5	5.38	70.0	2.35	23.55	1.18	11.9

Source: MOH

As noted above, we were not able to assess how increases in decision space might have affected this phenomenon in Chile, because all municipalities for which we had data were decentralized to the same degree. However, in Colombia we were able to assess the difference between certified municipalities with the wider decision space and the uncertified municipalities with narrower decision space, as well as the effect of certification at the department (or province) level.

Table 6 shows the regression analysis for total health expenditure per capita in Colombian municipalities. The independent variables included whether and how long a municipality had been certified, whether and how long the municipality's department had been certified, municipal population size, degree of urbanization, welfare indicators, municipal income, and human resources ratios.These regressions show that municipal certification has a significant negative relationship with total health expenditure per capita in 1996 and 1997.

Similarly, department certification was associated with declines in per capita expenditure. While this finding might suggest that gaining greater decision space

[6] We found similar trends in the analysis of how much of its own-source revenues a municipality would allocate to health. The allocation of own-source revenue to health was relatively high—between 40% and 60% in 1997. The richest municipalities allocated the most to health care in terms of general expenditure. However, the range between richest and poorest municipalities diminished over the years. In 1994, the richest municipalities had a ratio 2.37 that of the poorest municipalities. In 1997, the ratio between the richest and the poorest was 1.25.

contributed to increasing inequalities, this effect might be a temporary one. The large increase in certification during these years—95 municipalities were certified in 1996 and almost 200 were certified in 1997—may have disrupted the routine flow of funds.

Table 6. Colombia: OLS Regressions for Total Health Expenditure per Capita for 1994-1997

MODEL #1	1994 (N=1042)		1995 (N=1042)		1996 (N=1042)		1997 (N=1042)	
INDEPENDENT VARIABLES	COEF	Z	COEF	Z	COEF	Z	COEF	Z
CONSTANT	6.5932*	9.53	9.1914*	6.90	15.6112*	7.70	-19.595	-1.07
MUNICIPALITY CERTIFICATION	-1.5835	-0.29	-2.68742	-0.34	-6.7553*	-3.19	-6.179*	-2.12
DEPARTMENT CERTIFICATION	-4.133*	-3.77	46.4175	1.42	-8.1173*	-2.16	-15.23*	-3.66
MONTHS DEPT CERTIFIED	-.7905*	-5.06	-3.334**	-1.75	-.1638**	-1.52	.25066*	2.13
MONTHS MUN CERTIFIED	-.17144	-0.31	-.036901	-0.08	.141438	0.73	.250132	1.19
EXTERNAL RESOURCES	.55744*	12.05	.862389*	8.95	1.59864*	12.81	4.7709*	3.29
OWN RESOURCES	1.3859*	18.91	2.0423*	10.58	2.43916*	14.50	3.4655*	15.64
POPULATION/10000	----	----	----	----	----	----	----	----
% URBAN	.9800	0.66	-2.0047	-0.74	-5.807**	-1.59	-18.34*	-3.75
R^2	0.4040	----	0.2794	----	0.3354	----	0.3732	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

The relationship of length of time of department certification with total expenditure was negative and significant for years 1994-1996, becoming positive and significant only in 1997. For the years 1994-96, municipalities under the jurisdiction of departments that had been certified longer had lower health care spending per capita than those municipalities under the jurisdiction of newly—certified municipalities. In 1997, the opposite trend was seen, municipalities under the jurisdiction of longer certified departments had higher health care spending per capita.

Similar to the findings above, municipalities with higher own-source income and those with higher intergovernmental transfers (external resources) had higher levels of total health expenditure. We also found that municipalities with higher proportion of rural population were spending more than the more urbanized municipalities.

In Bolivia, our national data for the municipal level, was insufficient to make an analysis comparable to our analyses of Chile and Colombia. However, Gray Molina (1996) found that the allocation priorities of different types of municipalities varied considerably, with the capital cities allocating US$ 0.73 per capita, while all other municipalities allocated US$1.70, nearly two and a half times as much (See Table 7).

Table 7. Bolivia: Programmed Municipal Investments by Sector (1995)

SECTOR	CAPITAL CITIES	OTHER MUNICIPALITIES	BOLIVIA
Health	2%	6%	3%
Education	6%	30%	17%
Sanitation	15%	20%	17%
Urbanism	68%	23%	49%
Production	9%	21%	14%

From Gray-Molina (1996): p. 6

Our own data suggested, in contrast to what was found in Chile and Colombia, that poorest municipalities were assigning higher per capita funding to health than all other municipalities. Table 8 shows the total health expenditure per capita and ratio of total health expenditure to total general expenditure by income deciles. Since Bolivia data involves investments the allocations may be "lumpy" depending on construction expenses but the trend for the poorest municipalities (Decile 1) is consistent over three years.

Table 8. Total Health Care Spending per Capita by Income Decile

DECILES	1994	1995	1996
1 poorest	4.71	11.41	12.74
2	2.16	6.24	6.63
3	2.62	2.95	9.13
4	2.11	3.04	6.03
5	2.62	7.84	6.67
6	1.94	7.11	15.35
7	2.34	6.23	4.31
8	1.90	6.64	9.63
9	2.02	5.74	8.04
10 richest	1.13	3.90	8.79
Average	2.35 (105)	6.10 (189)	8.73 (187)
$10^{th}/1^{st}$	0.24	0.34	0.69
# reporting	105/106	189/190	187/187

Source: MOH

However, consistent with our findings for Chile and Colombia, we find that the gap between the richest and poorest is declining over time—from a ratio of .24 in 1994 to .69 in 1996.

Fiscal Laziness

As noted above, one concern expressed about fiscal decentralization is the fear that intergovernmental transfers from the central government will provide a disincentive for local governments to collect local revenues or will push local resources out of the sector that the center is funding. This concept is referred to in the literature as "fiscal laziness." In Colombia we were able to assess the relationship between intergovernmental transfers and local own-source revenue to see if those municipalities receiving more external funding had less incentive to raise their own funds in the health sector.

We defined “fiscal laziness” as intergovernmental transfer (external) revenue minus own-source revenue divided by external revenue plus own-source revenue (E-O)/(E+O). We used this ratio because it showed how the local contribution changed as a municipality's external funding and own-source funding increased and/or decreased. For example, a municipality that did not raise the same amount of their own-source revenue after receiving more external revenue was given a higher weight for fiscal laziness than a municipality that received more external revenue and also continued to generate the same amount or more of their own-source of funding. Table 9 shows that

poorer municipalities tended to be more fiscally lazy than wealthier municipalities, and the gap between the wealthy and poor municipalities decreased over the four years.

Table 9. Colombia: Fiscal Laziness per Income Decile

DECILES	1994	1995	1996	1997
	(E-O/E+O)	(E-O/E+O)	(E-O/E+O)	(E-O/E+O)
1	0.98	0.95	0.91	0.91
2	0.96	0.94	0.92	0.89
3	0.88	0.88	0.87	0.83
4	0.83	0.83	0.79	0.76
5	0.79	0.76	0.70	0.68
6	0.74	0.69	0.58	0.59
7	0.75	0.62	0.54	0.56
8	0.73	0.66	0.55	0.53
9	0.69	0.65	0.49	0.51
10	0.65	0.53	0.42	0.46
AVERAGE	0.80	0.75	0.67	0.67
$10^{TH}/1^{ST}$	0.66	0.56	0.46	0.51

Source: DNP

We were also able to assess whether the increase in decision space that accompanied certification was related to fiscal laziness. Table 10 presents the regression results for the dependent variable "fiscal laziness," defined above. The larger and more positive the coefficient the more fiscally lazy the municipality, having a tendency to use more external revenue and generate less of their own revenue.

Table 10. Colombia: OLS Regressions for Fiscal Laziness for 1994 - 1997

MODEL #1	1994 (N=944)		1995 (N=951)		1996 (N=971)		1997 (N=1039)	
INDEPENDENT VARIABLES	COEFF.	Z	COEFF.	Z	COEFF.	Z	COEFF.	Z
CONSTANT	.9116*	67.14	.9053*	57.231	.9030*	48.30	.9211*	63.12
MUNICIPALITY CERTIFICATION	.1598	1.11	.1360	1.435	-.0734**	-1.68	-.0194	-0.85
DEPARTMENT CERTIFICATION	-.0779*	-2.98	.4737*	7.090	-.0782*	-2.37	-.1489*	-6.16
MONTHS DEPT. CERTIFIED	-.0323*	-8.15	-.0436*	-11.67	-.0071*	-5.28	-.0039*	-4.56
MONTHS MUNIC. CERTIFIED	-.028**	-1.99	-.0152*	-2.93	-.0035	-1.25	-.0057*	-4.27
POPULATION/10,000	-.0005	-0.94	-.0015**	-1.87	-.0015*	-2.10	-.0011*	-2.73
% URBAN	-.0650*	-2.06	-.1332*	-3.82	-.1900*	-4.54	-.1483*	-4.64
R^2	0.2725	----	0.3552	----	0.2464	----	0.3451	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

Municipal certification was positive (meaning that certified municipalities might be more fiscally lazy), but was not a significant determinant of fiscal laziness in 1994 and 1995. However in 1996, municipality certification was significantly and negatively related, implying that certified municipalities were less lazy. Although not significant, this same relationship appears in 1997.

Department certification was a significant determinant of fiscal laziness for all years, starting off negative in 1994, becoming positive in 1995, and then becoming negative again in 1996 and 1997. This trend suggests that municipalities whose

departments were certified were less lazy in 1994, become lazier in 1995, and then return to being less lazy in 1996 and 1997. The length of time the municipality and department was certified was a negative and significant determinant of fiscal laziness.

These findings suggest that the increased decision space that came with certification in general did not encourage fiscal laziness. Indeed, it is associated with increased local contributions, and the longer municipalities and departments are certified, the less likely they are to be fiscally lazy.

The data configuration in Chile did not allow us to examine the same variables as in Colombia. However, we were able to assess a similar phenomenon. The Chilean study found that municipalities that were the sole providers of health services in their territory were likely to assign more per capita to their target populations than were municipalities where the regional offices of the Ministry of Health also provided services—mainly through outpatient clinics of hospitals. This may indicate a substitution effect in which central services substitute for municipal services, thus allowing municipalities to allocate their resources to other sectors—a form of "fiscal laziness" that will be discussed in other contexts below.

Table 11 presents municipal allocation data for six different types of primary care service provision. Groups 1 and 2 are rural health centers, Groups 3 and 4 are rural health posts, and Groups 5 and 6 are urban health centers. Groups 1, 3, and 5 are municipalities that are solely responsible for their population's primary care. For Groups 2, 4, and 6, in addition to the municipal facilities, there are primary care facilities provided by the regional institutions of the Ministry of Health. In municipalities where there is shared responsibility, the municipal allocations are targeted toward the population that they serve. In other words, the Ministry has developed a formula for assessing the population that should be served by municipal authorities and the population that remains the responsibility of the Ministry.

Table 11. Chile: Shares of Municipal Health Revenues by Type of Municipality 1996

Group	Central Gov't Contribution	Local Contribution	Other Revenues
1. Rural Center- municipal only	0.64	0.28	0.03
2. Rural Center- with central facilities	0.67	0.21	0.03
3. Rural Post- municipal only	0.60	0.32	0.04
4. Rural Post- with central facilities	0.69	0.18	0.04
5. Urban Center - municipal only	0.49	0.37	0.08
6. Urban Center- with central facilities	0.63	0.25	0.05

Source. Prepared from the Subdere and Minsal information data base

Table 11 shows that although the central government contribution remains relatively similar in all groups, those municipalities that have sole responsibility for their health services (i.e., groups 1,3, and 5 where there is no *Servicio* providing services) have higher local contributions than do those which share responsibility with *Servicios*. This finding suggests that in Chile the phenomena of "fiscal laziness" does not appear in relation to the funds provided by the center to the local government, but rather in the physical presence of centrally-funded primary care facilities.

Chilean Equalization Fund: Innovation for Equity

One of the major innovations that the Chilean decentralization process developed was the Municipal Common Fund. This horizontal equalization fund, established under the military government, receives up to 60% of the wealthier municipalities' own-source revenue and redistributes it to the other municipalities based on a per capita formula adjusted for rurality and capacity to generate revenue. This fund makes up the major share of funding for all but the wealthiest municipality, averaging 60% of all own-source revenues. It is this redistributive instrument that has made it possible for the poorer municipalities to assign relatively similar per capita allocations to health as seen in Table 3 above. The figures in Table 12 below show the difference in per capita funding before and after the allocations from the Municipal Common Fund. The second column of Table 12 presents the per capita municipal income after the Municipal Common Fund contribution (MCF). As can be seen, the contribution considerably increases the amount of available resources for those municipalities with less income of their own. In particular, it is worth pointing out that the decile with the lowest own-source income experienced a nearly ten-fold increase in the amount of resources available per inhabitant. Furthermore, distribution for the municipalities as a whole is considerably compressed: the Gini coefficient (a common indicator of inequality) is reduced from the initial 0.45 to 0.30.

Table 12. Chile: Municipal Disposable Revenue per Inhabitant: Distribution Statistics (1996)

	INCOME BEFORE MCF	INCOME AFTER MCF
AVERAGE	24,646	40,823
MEAN	17,437	30,984
VARIATION COEFFICIENT	1.22	0.70
GINI COEFFICIENT	0.45	0.30
90/10	6.68	3.22
50/10	2.76	1.40
75/25	2.31	1.73
# OBSERVATIONS	317	317

Source: Prepared based on Subdere information

As noted above (Tables 3 and 5), the central authorities in Chile and, after an initial period, also in Colombia, are not using the central intergovernmental transfers to compensate for local revenue capacity. The transfers tend to be based on a per capita formula that does not account for the differences in municipal ability to provide local funding. However, in Chile, the mechanism by which municipal income is redistributed horizontally among municipalities appears to have played a major role in promoting equity of financing among municipalities.

Percentage Earmarks for Health

The second equity mechanism used by the Colombian and Bolivia appears also to have been effective in improving the per capita allocations to health. This earmarking mechanism "forced" the local governments to assign a percentage of the

intergovernmental transfers to health. In Colombia there were two streams of intergovernmental transfers, each with a "forced" percentage assignment to heath. The percentage depended on several income and size indicators for the municipalities. In Bolivia, all municipalities were to allocate 3.2% of their intergovernmental transfer to supplies and equipment for a specific package of benefits for mothers and children. Since the formula for assigning the funds to the municipalities was based in part on a per capita estimate, it appears that this mechanism has resulted in a more equitable health allocation among municipalities.

Matching Grants

One mechanism that a central government can use to encourage local authorities to assign local resources to central government priorities is to offer a matching grant if the local municipality will provide its own funds as a portion of the total cost of a service. This mechanism is a means of reducing fiscal laziness and of promoting central government priorities without forcing the local government to comply by requiring the activity. In this sense the funds for matching grants are incentives to the local government. This mechanism was not common in the three countries studied, but there was one clear example in the district of Ñuble in Chile.

There are eight municipalities that make up Ñuble, all of which took control of their primary health care facilities by 1989. In 1995, six of the eight municipalities formed an association to fight the poverty of the area. They received a grant of US$500,000 from the Ministry of Health for a three-year project to attempt to provide a cooperative solution to resolve the main health problems in the area. By 1997, all eight communities had joined. The integrated health plan that the association developed focused on community development, with an emphasis on the areas of extreme poverty. The objective was to improve overall health, living conditions, and local management capacity. The association's administration is in the hands of an integrated directorate made up of the six mayors, a councilman from each community, and a President of the directorate.

To create and support the Municipalities Association, the Ministry of Health used a matching grant mechanism to explicitly encourage the eight municipalities to develop an Integrated Health Plan. The ministry established an initial grant for urgent investments and a fund for projects based on local diagnosis and initiative. This grant was a matching grant in which the central ministry provided M$201,246 and the Association, from its untied grant, provided M$30,500 in 1997. In addition, for certain specified activities, the municipalities provided additional funds from their own revenues. The matching grant and local sources funded rehabilitation, equipment and vehicle purchases, specific dental and eye programs, training programs, and the creation of Local Health Committees for community participation activities. The matching grant covered around 60% of the costs. The matching grant program resulted in an increase in local funding for health.

The Integrated Health Planning program did not expand to develop a common means of activity programming and planning. Rather, it focused attention on collective activities funded by the matching grants only. Once the central funding was ended the coordinated activities declined, suggesting the limits to sustainability of these kinds of incentives.

Allocations within the Health Sector: Promotion and Prevention

A major recent concern about decentralization is its implications for priority programs in public health. Many fear that local authorities will prefer clinical curative services for ill individuals and not allocate resources toward the major public health efforts—maternal and child health, immunizations, family planning, etc. In particular, when mayors have control over allocation decisions, pressure for hospital care is likely to come from the electorate, from physicians, and from entrepreneurs involved in local construction. Although we were able to examine this issue in Colombia, it was not possible in Chile because there the municipalities were responsible only for primary health care. Their range of choice about allocations within the health sector was therefore limited and there are no available data to assess the allocations to different types of services. Again, we did not have adequate data to evaluate allocations in Bolivia, although it appeared that lack of funding for health in the year before the Maternal and Chile Health Insurance suggested that Bolivian municipalities had other priorities.

In Colombia we had data on municipal expenditures assigned to promotion and prevention activities and attempted to predict the portion of health expenditures allocated to promotion and prevention (PPE) by a series of independent variables including variables about certification. We found a general tendency for per capita expenditure in prevention and promotion to increase. It more than doubled from 2.67 pesos per capita in 1994 to 5.83 in 1997 (adjusted to 1997 pesos). The gap between wealthiest and poorest municipalities, however, narrowed from a ratio of 1.35 in 1994 to 1.10 in 1997 (Annex 1 Table 1). Regression analysis showed that municipal certification was related to lower per capita expenditures on promotion and prevention for 1994 and 1995 and was positive for 1997 (Annex 1 Table 2). Length of municipality certification was a positive and significant determinant of PPE per capita for all years except 1994. Department certification was negative and significant all years except 1995. This implies that those municipalities under the jurisdiction of certified departments allocated less to PPE per capita than those municipalities under the jurisdiction of non-certified municipalities. However, these trends were not strong and the independent variables in the regressions explained less than 10% of the variance.

HUMAN RESOURCE DECISIONS

In addition to decisions about allocation, local governments in Chile and Colombia (but not Bolivia) were given some range of choice over human resources. Data on human resources, however, while limited in both countries, were sufficient to examine some of the issues. In Chile we had information on salaries and contracted hours of physicians. In Colombia, we had information on the ratios of administrators to providers.

In Chile national level data on human resources suggests that wealthier municipalities were able to contract four times as many physician hours per beneficiary as the poorest municipalities (See Annex 1 Table 3). What the physicians were paid, however, was less unequal. With a mean of approximately US$1,500 monthly in 1994, the ratio between wealthiest and poorest was 1.8 times with a Gini coefficient of only

0.17. We also found that rural salaries were higher than urban salaries, suggesting that the decentralization process has forced rural areas to offer higher salaries to retain or attract physicians. This is likely to be a result of decentralization because, until 1996, municipalities could set salaries without restriction whereas salaries were uniform before decentralization.

In Colombia we were able to compare the number of clinical and administrative hours available in municipalities. Furthermore, we could assess the proportion under civil service rules and therefore less subject to local management control and those contracted by the local authorities. The data show that the portion of human resources under contract is low, but increasing for both administrative and clinical staff. While the poorer municipalities were more likely to hire contract staff than the richer municipalities, this difference was declining over time (Annex 1 Table 4 and Table 5). The regression analysis showed that municipal certification did not affect the hiring of administrative personnel. However, it was significant in determining the proportion of contract to civil service staff (Annex 1 Table 6). Certified municipalities during the first two years (1994-5) hired less contract staff than did non-certified municipalities, but after the large increase in certification, those that were certified hired more contract workers than did non-certified municipalities. Furthermore, those municipalities that had been certified longer were more likely to hire contract workers. We also found that those municipalities that put more of their own-source revenue into health tended to hire more contract workers. Overall, certification seemed to be related to hiring contract workers, something we might expect if certification means municipalities exercise more management control.

SERVICE ORGANIZATION INNOVATIONS

The national-level data did not allow us to examine much about the service organization choices made by local authorities. However, the case studies in the field in Chile and Bolivia did provide some insight into these choices.[7] The Yepes case studies in Colombia did not address this issue in detail.

Chile

In Chile, service innovations tended to focus on issues of managing the services, rather than significant departures from the standard primary care organization of facilities and programs. This may be due to the historical legacy of a relatively strongly supervised national system that had strongly enforced norms of practice. It may also be due to a continuing explicit role of the regional Ministry of Health offices in monitoring and coordinating technical services; although, based on anecdotal evidence, it appears that this function varied from region to region.

One of the unusual characteristics of Chile, which we attempted to assess through paired case studies, was the existence of several municipalities that still remained

[7] In Chile, an experienced health sector researcher conducted interviews with key stakeholders in five municipalities selected in purposeful pairs. In Bolivia, due to the weakness of the national level data a more systematic interview schedule was implemented by teams of two health sector interviewers with semi-structured interview guides and a systematic scoring system. They conducted stakeholder interviews in 17 municipalities in three regionally distinct circuits.

under central control. We had hoped to be able to use these municipalities as a control for comparing centralized to decentralized municipalities. However, we found two obstacles to this comparison. First, there was no comparative municipal level data for the centrally-controlled facilities, since the central budgets were not disaggregated to the municipal level. Second, we found that in two of the three areas where the central government is responsible for the provision of all primary care (Santiago, Maipu, and Aysen), local governments in the richer municipalities provided resources for primary health care even though they were not legally responsible. In Santiago and Maipu the local governments allocated additional funds and in one case municipally administered clinics and staff in addition to the Regional services provided by the Ministry of Health. In this case these municipal initiatives may have simply been "mimicking" the trend of all the other municipalities.

Another innovation in organization was the case of the two extremely poor regions, Aysen and Ñuble, where small rural municipalities appear to have been unable to assume full responsibility on their own for primary health care. A dispersed population, difficult terrain, and the lack of own-source revenues meant that the financial resources that were being transferred through the central government funding were insufficient to maintain the services. The response to this situation in the two areas was, however, quite different. In Aysen, at the initiative of the Regional Office of the Ministry of Health, the municipalities banded together to insist that the central Ministry return control to the Regional Office. In this case, the recentralization of the health services resulted in restoration of previously good performance. An alternate response in Ñuble was to create an Association of Municipalities, initiated and subsidized by the central Ministry of Health. Although the municipalities did not initiate or fund the association (and were somewhat reluctant participants), the mechanism did avoid the need to recentralize the services.

The fundamental problem appears to have been the need to adjust the intergovernmental transfer so that sufficient resources would be available to the municipalities since their resource needs were greater than other municipalities and their resource base was insufficient to expect local counterpart funding to make up the gap.

The participation of the local community seems to have encouraged the municipality of Santiago to provide its own services, even though it had no legal requirement to do so. Community participation also seems to have been crucial to significant allocations to health in the second largest city in Chile, Concepción, where physicians were also local politicians and were able to gain significant increases in local funding for health services. As noted above, in Ñuble, local community committees were effective in lobbying municipal authorities for increased allocation of funds for special activities through a matching grant program. The local mechanisms of direct community participation in health facilities seem also to be functioning on more operational levels.

In several cases one of the principal innovations was the use of contracts among municipalities or between municipalities and the Regional Offices of the Ministry of Health to reduce duplication of effort and combine resources to produce more efficient services. In one case, this cooperation was the result of a matching grant from the central government that resulted in an increase in local allocations to health.

Bolivia

In Bolivia some of the innovations were similar to the system management innovations in Chile, but others were innovations in the ways service was delivered. With our larger sample of case studies of municipalities we were able to score the number of municipalities that adopted a series of innovations. In the area of service delivery these innovations included:

- the establishment of a general pharmacy in the public clinics (in 10 of the 17 municipalities);
- coordination and contracting with other municipalities to combine resources and services (2 of 17);
- coordination and contracting with NGOs and other private providers to provide municipal services (8 of 17);
- development of payment agreements for patients from other municipalities (9 of 17);
- special subsidies for poor patients (10 of 17); special programs for increasing coverage such as house-to-house visitation (5 of 17); and
- increasing communication and information (4 of 17).

In addition, some communities innovated in hiring practices with 7 municipalities hiring doctors directly even though this is supposed to be a function of the Ministry, and 5 municipalities hiring their own administrative staff.

These innovations suggest that decentralization is allowing municipalities to develop their own solutions to traditional service delivery and human resource problems—adding pharmacies, initiating outreach, and providing subsidies to the poor. They are also innovating in terms of developing new organizational arrangements both between municipalities for coordination and payment exchange, and within the municipality with NGOs and other private providers.

LOCAL CONDITIONS AND RELATIONSHIPS

Many observers of decentralization suggest that the effectiveness of decentralization depends on local capacities and the relationships among local stakeholders. Municipalities with strong institutions and experience in managing social sector initiatives are seen as likely to take more advantage of decentralization and to be more capable of making informed and rational decisions within their decision space. Furthermore, municipalities with good internal relations among experienced and capable stakeholders are expected to be likely to have better performance. Those communities without these conditions are expected to do worse under decentralization. These conditions then might negatively affect the equity of the system in ways that centralized systems might not. We sought to examine these propositions in all three countries, with varying degrees of success.

Chile

In Chile we were able to examine a proxy of institutional capacity. We had data on the ability of municipalities to register their populations for per capita payment that was to be implemented in 1996. We had municipal data on registration rates at municipal clinics in relation to the estimated beneficiary population. We found that success in obtaining higher registration rates was related to higher utilization of primary care. In other words, registration and utilization might together indicate higher levels of institutional capacity. We also found that the relationship is strongest for municipalities where Regional Offices of the Ministry of Health also offered primary care services and that municipalities with a smaller proportion of vulnerable populations have higher registration rates.

These findings suggest that our indicator of institutional capacity was probably interrelated with one of our performance variables—utilization rates—and not with any of the other variables of performance. It is not clear, however, what the causality is since higher utilization might lead to higher registration, regardless of the effectiveness of the municipal capacity. Alternatively, both higher registration and higher utilization might be indicative of higher institutional capacity. Without alternative data to measure institutional capacity we were unable to examine these hypotheses.

The case studies also did not offer a systematic means of assessing institutional capacity. They did however suggest that municipalities with stronger local participation were more likely to undertake new health initiatives that were seen as positive by the interviewees.

Colombia

In Colombia municipalities were responsible for implementing a standardized survey to identify the poor population that qualified for a subsidy for the social insurance program. Unfortunately, their data are not in a form that allows us to assess the local capacity to implement a registration program as we were able to do in Chile. The data show that certified municipalities and those with larger populations had higher numbers of beneficiaries who would qualify for a subsidy, but does not tell us if this was a function of effective registration, since, unlike in Chile, we do not have estimates of what that rate should be. We had no other data to assess local capacity and interrelationships of major actors in Colombia.

Bolivia

In Bolivia we were able to assess institutional capacity through a variety of indicators in the 17 municipal case studies and to examine explicitly the relationships among different stakeholders in the local health sector. The analysis first assessed the installed capacity before decentralization, the experience in health care in the municipality, and the number of alternative forms of health care available to the municipality. We hypothesized that a municipality with a larger installed capacity (in terms of infrastructure, equipment, availability of human resources), as well as previous experience in providing health care, and more functional health care facilities

(generating certain custom and comfort from the population), would be a stronger municipality. The availability of alternative forms of health care, in terms of easy access (distance and cost) to other municipality health centers, to private services, and/or traditional medicine, could be factors that limited the allocation of resources to health, diminished utilization, and the quality of services. We related these variables to indicators of performance that included allocation efficiency, technical efficiency, utilization, quality, and equity.[8]

The variable that characterized installed capacity showed a certain degree of polarization. Fifty-three of the cases fell in the extreme low level of installed capacity while 35% of the cases fell in the extreme high and/or appropriate end of installed capacity. In terms of experience, 11 of the 17 cases were assessed with low or limited levels, and 5 of the remaining 6 had a high level of experience. Experience and installed capacity were related to one another, showing a stronger relationship in municipalities with a larger installed capacity. A relatively large number, 11 out of 17 of municipalities, had alternative forms of health care. The availability of alternative forms of health care was negatively correlated with the extent to which other organizations (mainly people) offered these alternative services, when DILOS (Local Health Directorates) were not present. This implied that when there were alternative forms of health care, the population had less incentive to support the DILOS. Finally, the level of experience showed a small correlation with the functioning level of the DILOS, implying that DILOS function better in municipalities that have a certain amount of experience in health care. However, these institutional characteristics before decentralization did not show any significant correlation with the outcome or performance indicators.

We next examined the current institutional capacity measured by the perceived effectiveness of the DILOS in coordinating health activities in the municipality. This measure was correlated with our measures of efficiency in the provision of services (technical efficiency) and with equity (see below for analysis of these indicators. However, we also found that the functioning level of the DILOS was correlated with the individual characteristics of the mayor and doctor (see below) and the relationship between them. This suggested that the institutional capacity of the DILOS depended not so much on the institution itself, but on individual characteristics and relationships. This is consistent with the interpretation that in weak institutional environments, local leadership is an important determinant of effective performance.

Next we examined the characteristics of the major stakeholders—the mayor and the local physician. We assessed their level of experience, knowledge of the law,

[8] Allocation efficiency was defined as the perceived alignment of municipal priorities with the preferences of the local population as well as the relationship between investments, needs, and available resources. Technical efficiency was defined in terms of proportions of health personnel, availability of medical supplies, minimum quality of inputs, and level of basic services offered. Utilization was defined by the number of visits, the number of persons that had access to services, and the types of services offered. Quality was defined in terms of changes observed in relation to the infrastructure availability and conditions; equipment and instrument availability; the level of medical resource diversity, availability, and opportunity; and the number and qualification of the available health care personnel. Equity was defined as a change toward more primary care services and an increase in accessibility of these services for poor and vulnerable groups.

respect for the law, and initiative. There was quite a large variation in the scoring for mayors, with knowledge of the law scoring the lowest means and experience scoring the highest means. Having knowledge of the law showed a small correlation with resource allocation efficiency (0.556). This implied that those mayors that had more knowledge of their legal obligations in relation to health assigned more resources to health, had tried to improve the combination of resources (the relationship between infrastructure, equipment, and human resources), had adopted mechanisms for inter-municipality compensation (making payments for the services received in other municipalities by residents of his municipality and vice versa), and had tried to consider the priorities of their population. The two characteristics of the mayor that showed the strongest correlation with performance indicators were those related to the law ("respect for" more than "knowledge of") and his level of initiative. In terms of respect for the law, a significant correlation (greater than 0.70) was found in three of the five performance indicators, resource allocation efficiency, technical efficiency, and quality. In terms of the mayor's initiative, a significant correlation was found with resource allocation efficiency, and a high correlation was found with the four other performance indicators.

These results lead to two important conclusions. The first was that in general terms, when the laws established through decentralization were understood and correctly applied, positive results ensued. The second conclusion was that the mayor's personal initiative was related to positive results. We took this second conclusion a step further to say that, even with a weak institutional system, the creativity of the mayor could help confront weaknesses at the local level.

Although we examined the individual characteristics of the local physician and found similar variations to those found with the mayors, we found only one significant relationship between these characteristics and performance variables. Doctors who were judged to have greater "social sensibility" were associated with higher utilization, allocation efficiency, and equity. The correlation with resource allocation efficiency implied that a municipality with a doctor that had more social sensibility would be able to better prioritize its health care needs. The fairly strong association between social sensibility and utilization implied that a municipality with a doctor that had a certain amount of social sensibility would have a population with a more developed confidence in the health care services. In terms of equity, a more sensible municipality tended to organize their health systems in favor of the disadvantaged population.

The study also examined four different types of relationships among the key actors: 1) the relationship between the mayor and the community, 2) the relationship between the mayor and the local doctor, 3) the relationship between the local doctor and the community, and 4) the relationship between the mayor and the municipal council.

The mayor-community relationship was defined by the support from the community (number of votes and support thereafter), whether he/she consulted the population about the municipal Operational Plan, and the existence of any negative attitudes from the population concerning the mayor's actions. The mayor-doctor relationship was assessed based upon the regularity of insurance repayments and health services payments, and the communication between health care personnel and the mayor concerning certain health topics (the situation, necessities, and priorities). The doctor-community relationship was assessed based upon aspects such as the ease of communication (if the doctor spoke the native language of the area), availability

(number of home visits made and hours available for visits), respect for the customs of the area, and social sensibility. Finally, the mayor-council relationship was assessed based upon the frequency of meetings, the level at which the projects were consulted and discussed, and the councilors' knowledge of topics related to municipal management and how much the mayor can rely on them.

The relationship between the mayor and the community was correlated with the resource allocation efficiency variable. This implied that, among other things, where there was a greater participation from the population in the municipal Operations Plan there was a more efficient allocation of resources. The relationship between the mayor and the doctor was correlated with resource allocation efficiency, technical efficiency, and quality suggesting that this relationship was most important for effective delivery of service and not related to utilization and equity. The support that the mayor received from the Council did not show any correlation with the dependent variables. This implied that the general support of the Council was not a critical factor in terms of sector performance.

IMPACT ON PERFORMANCE

In this section we review the evidence we have about the performance of the decentralized systems. We attempted to assess how the decentralized municipalities performed on indicators of equity, efficiency, and quality. As noted in the introduction, this was a major interest of the study, however, the data available only offer a partial view on performance. In none of the countries were we able to collect reliable data at the municipal level from before the process of decentralization. Therefore, we could not track the changes in performance variables from before to after decentralization. Only in Colombia were we are able to assess the difference between different degrees of decentralization by examining data from certified municipalities and comparing it to non-certified municipalities. Our attempt to compare the few municipalities in Chile that remained under centralized control to the decentralized municipalities was unsuccessful, because there were no comparable data on the centralized services. In Bolivia, we did not have systematic reliable national level data; however, we were able to use subjective interview data to get some indicators of performance in selected municipalities. What follows is a review of the evidence we have on performance indicators.

Equity

We have already assessed a major indicator of equity—the equity of allocations as measured by per capita health expenditure in Chile and Colombia. This indicator, however, is really an intermediate indicator and not a measure of how these resources are translated into the availability of services to the population. In this section we examine a second proxy for equity, utilization rates at health services. These indicators also are inadequate since we are unable to control for other factors that might affect utilization, such as the availability of alternative providers.

In Chile we found that utilization of health services increased over the period studied and was related to the level of expenditure and the degree of rurality of the

municipality.[9] Municipalities with higher per capita total municipal expenditure rates also had higher per capita utilization. It is important to note that it was total municipal expenditure and not the amount of local own-source funding, that was related to utilization. We also found that municipalities with larger rural populations had higher volume of primary care activities per capita (Annex Table 7). However, examining the trend over time we found that municipalities with higher urban populations increased their utilization rates faster than rural areas suggesting that this relationship may shift in the long run. We also found some evidence that the presence of the services of the Regional Offices of the Ministry of Health affected municipal services. In urban municipalities without these additional services, increased expenditures resulted in significant increases in utilization. No other variables in the data set provided any additional explanatory value.

These findings suggest that decentralization that allowed greater expenditures by wealthier municipalities was likely to also to result in more inequitable utilization. However, surprisingly, municipalities with higher percentages of rural beneficiaries have higher utilization rates of public services. This suggests that more rural areas may benefit from greater access, at least to public facilities.

In Colombia, utilization was measured by the amount of total general services rendered in all health care facilities in each municipality.[10] As in Chile utilization increases over time and is related to expenditure and rurality (Annex Table 8). However, unlike Chile, own-source revenue was a positive significant determinant for utilization of health care services for all years except 1996. By contrast, revenue from central intergovernmental transfers (which varied more in Colombia than in Chile) was a significant negative determinant for utilization in 1994 and 1997. The greater the transfer, the less utilization. While it may make sense that increases in own-source expenditures would result in greater utilization, since local population may want to get its money's worth, it is not clear why increases of external funding would be related to lower utilization.

Examining the effects of increased decision space we found that municipal certification was significant, but negatively related to utilization for 1994 and 1996. This might be explained by the fact that municipal certification was a new process in 1994 and as shown above, the significant increase in numbers of certified municipalities in 1996 may explain this effect. We also found that for 1996 and 1997, the length of time the municipality was certified was a positive significant determinant of utilization of health care services. This suggests that the negative relationship for certification in1994 and 1996 was a short-lived phenomenon. Similar results were found for department certification. The Yepes case studies found a general impression among local stakeholders that more services were available in certified municipalities.

As in Chile we found that another determinant for utilization was the percent of persons living in rural areas for all years except 1996, when it was insignificant.

In Colombia, then we find that it is own-source revenue that encourages higher utilization rates, rather than the total revenue that was associated with utilization in

[9] Utilization was measured by an index of medical contacts per beneficiary weighted by the different costs for medical attention and for routine check ups, an index used by the Ministry of Health.

[10] The concept “general services” includes both inpatient and outpatient visits since Colombian hospitals do not keep a record of the type of visit.

Chile. In both countries we found that municipalities with higher percent of population in rural areas also had higher utilization rates. In Bolivia, our case studies found that utilization was associated with several individual characteristics and variables describing relations among major stakeholders (Annex 1 Table 9). Estimates of increased utilization in general and of the poor in particular were both related to mayors who had higher respect for the law, took greater initiatives, had innovated in service delivery, and had better functioning DILOS. They were also related to municipalities with doctors with better community relations and greater social sensibility. Again, in Bolivia where municipal institutions were weak, the importance of innovative individuals who respected the intent of the laws on decentralization appears to have paid off in increased utilization.

Efficiency

It is often argued that decentralization will allow local managers more flexibility to make decisions that will increase efficiency in the use of health resources. Our study attempted to examine the variables that might explain variations in municipal level efficiency.

For economists, technical (or productive) efficiency requires maximizing the product obtained based on a given set of resources (inputs), or alternatively, minimizing the production costs of a given quantity of units of the good or service being proffered. A crude measure of the efficiency of municipal primary health care management is the ratio between health activities (outputs) and the level of spending (inputs), assuming uniform quality and input costs.

In Chile our analysis found that our efficiency measure was related to the degree of rurality (controlled for type of service rendered), to the registration rate in municipal clinics, and to the degree of socio-economic vulnerability (Annex 1 Table 10). This suggests that municipalities with more rural populations, those which have been more effective in registering beneficiaries, and those with less vulnerable populations are more technically efficient. These relationships however had low explanatory power so must be taken with caution.

An element of efficiency is to examine how well resources achieve outcome objectives, In Chile, we were able to assess changes in infant mortality rates at municipal level. Infant mortality rate was not related to any of our variables—it was best explained by its prior level—confirming other studies which suggest that the changes in funding and management of the system are too short-term to affect infant mortality.

In Colombia, we defined technical efficiency as the amount spent in *pesos* per unit of health care provided. The more spent per unit of health care the less efficient the municipality. The regression analysis found that higher spending of external resources for all years and higher levels of own source resources for 1994 and 1995 was associated with lower efficiency, as might be expected unless management made significant changes in human resources and services (see Annex 1 Table 11). The effect of municipal certification was significant only in 1996 when its effect was to improve efficiency. These findings should be taken with caution since, unlike Chile, the unit of health care provided includes both outpatient and inpatient utilization since municipalities in Colombia are responsible for first-level hospitals.

In Bolivia we found that technical efficiency was related to the mayor's respect for the law, his initiative, a positive relationship between mayor and local doctor, and a well-functioning DILOS (Annex 1 Table 9).

Quality

We had little clear evidence of quality in any of the country studies. In Bolivia, we found that estimates of quality improvements made by the key stakeholders were associated with the same variables that were associated with technical efficiency noted above: the mayor's respect for the law, his initiative, a positive relationship between mayor and local doctor, and a well-functioning DILOS. The Yepes case studies in Colombia also suggested that certification had resulted in a perception by stakeholders of improved quality.

In Chile, we have some data on opinion polls suggesting that despite major increases in primary care funding in the democratic period, the general opinion of health system quality was that it had declined. Polls indicate that whereas in 1988 the Pinochet government's health policies obtained 33% public approval, in 1993 under the first democratic government approval declined to 19% (Carciofi et al. 1996). Moreover, a Centro de Estudios Públicos survey conducted in 1993 showed that 65% of those polled considered that the quality of available health services had remained the same or declined in the last five years (CEP 1993). These public opinion poll-based statistics are not conclusive and are not specific to the municipal primary health care system. A series of studies done for the Ministry of Health in 1997 found that waiting time and perception of quality was no different for municipal run services and those managed by the Regional Health Offices (Ministereo de Salud, Chile 1997.

CONCLUSION

It is important to recognize that Chile, Colombia, and Bolivia are in the forefront of experiments in decentralization in Latin America. They have made significant efforts to transfer responsibility and authority to municipal authorities. While Venezuela has devolved responsibility to state governments and Nicaragua has deconcentrated power to the integrated local health districts (SILAIS) of the Ministry of Health, only Brazil, with its elective program for municipalities, has implemented a comparable decentralization policy in Latin America.

We have found that the decision space allowed local municipalities has varied considerably. Decentralization should not be viewed as a single act of giving up power from the center to local governments, nor should it be seen as a permanent transfer of authority. Not only do countries assign different ranges of choice over different functions, but these ranges of choice change over time. In Chile and Bolivia quite wide ranges of choice over some key functions—especially over allocation decisions and over human resources decisions—were narrowed over time. At the end of the study period for all countries there was a tendency for decision space for many functions to be in the moderate to narrow range. Interestingly, control over budgetary allocations tended to be wider than service organization decisions.

Human resources decisions on salaries and civil service rules in all countries ended up in the narrow range—retaining or restoring centralized control over health sector personnel. In the case of Chile and Colombia, this restoration was at the initiative of the health professionals themselves, and in Bolivia these functions were always controlled by the central authorities. However, moderate choice was allowed for contracting non-civil service personnel allowing some range of local management flexibility over human resources.

Within these ranges of choice municipalities made some major innovative decisions. A major choice was about allocating the intergovernmental transfers and own-source revenues. We found that although wealthier municipalities were able to assign greater portions of their own-source resources to health care in Chile and Colombia, the gap in per capita health expenditures between wealthier municipalities and poorer municipalities was narrowing, not widening, over time. Although central government intergovernmental transfers to municipalities tended toward a uniform per capita assignment in both countries, local government revenue assignments increased sufficiently to begin to narrow the gap. In Chile, the capacity of local governments to assign own-source revenues was improved by an innovative horizontal equity fund—the Municipal Common Fund—that reassigned local own-source revenues from wealthier to poorer municipalities. The earmarked assignment of intergovernmental transfers in Colombia and Bolivia appeared to have had a similar equity effect, since the assignment to the municipalities was based partially on a per capita formula.

It is often feared that decentralization that provides significant intergovernmental transfers for health will result in "fiscal laziness" in municipalities—allowing them to reduce their own-source revenues or allocate them to other sectors. We found, however, that certified Colombian municipalities with greater decision-space choice over the intergovernmental transfers were less likely to be fiscally lazy. In Chile we did

find a tendency for municipalities to allocate less funding per capita if the Regional offices of the Ministry of Health also provided primary care services in their municipality—a kind of physical presence that encouraged fiscal laziness.

Matching grants were not a major means of encouraging local governments to assign some of their own resources to projects and activities prioritized by the central government. In one case in Chile we found that matching grants did create and support activities of a Municipal Association of eight municipalities. However, it was not well sustained after the funding stopped.

The municipalities also made choices about human resources, even though these choices were more limited by restrictions on municipal decision space. In Chile, we found that richer municipalities paid more in salaries, but that rural areas paid higher individual salaries in order to attract physicians to rural areas. The municipal ability to raise rural salaries was temporary, since in 1996 the Statute on Primary Care Workers restored limited salary ranges, but it appears that the rural municipalities took advantage of the initial wide range of choice. In Colombia and Bolivia, decentralization appears to have led to a greater use of contract workers, both administrative and clinical, although the major workforce remained under civil service rules.

In the area of service organization, municipalities innovated in a variety of areas. In areas where municipalities had no legal responsibility for health they assumed it, in others where resources were insufficient they returned the services to the central authorities or created associations among municipalities to manage services collectively. They also created new mechanisms for paying each other for services rendered to non-residents, developed coordination and contracting mechanisms for NGOs and other private providers, and developed new approaches to extending coverage and providing pharmaceutical services. While the municipalities did not tend to change the basic package of primary care services that was highly standardized by Ministries, in Chile, they did add additional services—such as optometry and programs for the aged—desired by the communities

We also found that different institutional capacities had some effect on decentralization. In particular capacity to register beneficiaries in Chile and Colombia seemed to be related to utilization of these services. While institutional capacity in Bolivia was generally weak, decentralization benefited from some of the individual characteristics of mayors and the local doctor (such as respect for the decentralization law, willingness to take initiatives, and interest in local community participation) as well as the functioning of the coordinating organization DILOS.

What can we conclude about the effects of decentralization on performance? We have found that increases in funding seem to be associated with increases in utilization, and that the gap in per capita health expenditures between richer and poorer municipalities seems to be narrowing, not widening over time in both Chile and Colombia, the only countries for which we have data. This suggests some improvement in equity may have emerged under decentralization in these two countries.

We also find that local individuals and relationships among stakeholders seem to have an impact on utilization in weak institutional environments as found in Bolivia. While these differences may led to greater inequalities, we also found that those municipalities where mayors respect the laws of decentralization and where the institutions created by decentralization are functioning effectively are better performers. This suggests that

more efforts to institutionalize decentralization may result in better performance overall under decentralization.

Our findings for efficiency and quality are less clear simply because the data are lacking or are inadequate. There is some evidence that efficiency is not improved by decentralization certification in Colombia and some indication that rural health care is more efficient in Chile and Colombia. However, the relationships and the variables are inadequate to draw strong conclusions. Perception of local stakeholders in Bolivia and Colombia seem to suggest that quality has improved under decentralization; however, this is impressionistic data not confirmed with any quantified measures.

Without better evidence it may be safe to conclude that both the detractors and the advocates for decentralization are likely to be wrong. Decentralization is not a block transfer of power, but rather a range of choice allowed over different functions. It is also not given completely at one time, but rather adjusted over time— tending toward the moderate range of choice in many functions. It has allowed significant innovative choices particularly over allocation decisions and over service delivery. Few innovations occur in human resources except for contracting a limited number of providers and administrators. Decentralization as implemented in Chile, Colombia, and Bolivia appears to be improving some indicators of equity—a tendency toward similar per capita expenditures for wealthier and poorer municipalities—and for increases in and more equal per capita spending in promotion and prevention. However, it does not seem to be related clearly to major changes in performance. This is not the kind of conclusion advocates or detractors like to see, because it does not lend strong support for either argument.

However, it seems likely that decentralization is a policy that will be promoted not only in the health sector, but for all social sectors. It is an organizational process designed to enhance local democracy, as well as for objectives of equity, efficiency, and quality improvements in the health sector. If this is the case, then we should probably take heart that the evidence here suggests that inequities in health funding decline during a period of decentralization and that utilization increased significantly. We should also be encouraged by the availability of mechanisms such as the Chilean Municipal Common Fund to improve equity in a decentralized system. These are important lessons for other countries as they embark on decentralization.

BIBLIOGRAPHY

GENERAL

Bossert, Thomas (1998). "Analyzing the decentralization of health systems in developing countries: decision space, innovation, and performance." *Social Science and Medicine* 47(10): 1513-27.

Collins, C. and A. Green (1994). "Decentralization and primary health care: some negative implications in developing countries." *International Journal of Health Services* 24(3): 459-75.

Litvack, J., J. Ahmad, and R. Bird (1998). *Rethinking Decentralization in Developing Countries.* Washington, DC: The World Bank:.

Mills, Anne (1994). "Decentralization and accountability in the health sector from an international perspective: what are the choices?" *Public Administration and Development* 14: 281-92.

Mills, Anne, J.P. Vaughan, D.L. Smith, and I. Tabibzadeh (1990). *Health System Decentralization: Concepts, Issues and Country Experience.* Geneva: World Health Organization: Geneva.

Prud'homme, Rémy (1995). "The dangers of decentralization." *The World Bank Research Observer* 10(2): 201-20.

Rondinelli, Dennis (1981). "Government decentralization in comparative perspective: theory and practice in developing countries." *International Review of Administrative Science* 47(2): 133-45.

Rondinelli, D., J.S. McCullough, and R.W. Johnson (1989). "Analyzing decentralization policies in developing countries: a political-economy framework." *Development and Change* 20: 57-87.

World Bank (1993). *World Development Report: Investing in Health. New York:* Oxford University Press.

CHILE

Albala, C. and F. Vio (1995). "Epidemiological transition in Latin America: the case of Chile." *Public Health* 109: 431-42.

Aedo, Cristián, and Osvaldo Larrañaga (1994). *Sistema de Entrega de los Servicios Sociales: Una Agenda para la Reforma. Santiago:* Banco Interamericano de Desarrollo.

Azevedo, Antonio Carlos (1998). "La provisión de servicios de salud en Chile: aspectos históricos, dilemas, y perspectivas." *Revista de Saude Publica* 32(2): 192-99.

Bossert, Thomas J. (1993). "Lessons from the Chilean model of decentralization: Devolution of primary care to municipal authorities." Policy Report No. 1, USAID Latin American and Caribbean Health and Nutrition Sustainability Project.

Bossert, Thomas J., Osvaldo Larrañaga, Antonio Infante, Joel Beauvais, and Diana Bowser (2000). *Applied Research on Decentralization of Health Systems in Latin America: Chile Case Study*. Data for Decision Making Project. Boston: Harvard School of Public Health.

Carciofi, Ricardo, Oscar Cetrángolo, and Osvaldo Larrañaga (1996). *Desafíos de la Descentralización: Educación y Salud en Argentina y Chile.* Santiago: Naciones Unidas/Comisión Económica para América Latina y el Caribe.

Castañeda, Tarsicio (1992). *Combating Poverty: Innovative Social Reforms in Chile During the 1980s.*San Francisco: ICS Press.

Duarte, Dagoberto (1995). Asignación de recursos per cápita en la atención primaria: la experiencia chilena. *Documento de Trabajo No. 08/95. Santiago:* Corporación de Promoción Universitaria.

_____ (1993). "Asignación de recursos financieros al sector municipalizado de salud." *Papeles de Trabajo* No. 29. Santiago: Programa de Estudios Prospectivos.

Graham, Carol (1991). *From Emergency Employment to Social Investment: Alleviating Poverty in Chile.* Washington, DC: The Brookings Institute.

González-Reyes, Luis (1995). *Atención de la Salud en Chile.* Santiago: Editorial Antártica.

Hojman, David E. (1993). *Chile: The Political Economy of Development and Democracy in the 1990s.* Pittsburgh: University of Pittsburgh Press.

Jiménez de la Jara, Jorge (1994a). Evolución y reforma del sistema de salud en Chile. *Corporación de Promoción Universitaria, Documento de Trabajo* No. 31/94.

_____ (1994b). Reforma de los sistemas de salud en América Latina: el caso de Chile. Seminario, Banco Mundial-EDI, OPS, Ministerio de Bienestar Social de Argentina, 14-16 March 1994.

_____ ed., (1991). *Chile: Sistema de Salud en Transición a la Democracia.* Santiago: Ministerio de Salud.

_____ and Margarita Gili (1991). "Muncipalización de la atención primaria. " In Jiménez de la Jara, ed., 1991, *Chile: Sistema de Salud en Transición a la Democracia*, pp. 49-78.

Larrañaga, Osvaldo (1997). *Eficiencia y Equidad en el Sistema de Salud Chileno.* Santiago: Naciones Unidas.

_____ (1996). "Descentralización y equidad: el caso de los servicios sociales en Chile." *Cuadernos de Economía* 33(100): 345-65.

_____ (1992). "La politica fiscal en Chile: 1985-1991." *Serie Investigación* 1-47 Sept. 1992. Santiago: Programa Post-Grado de Economía, ILADES/Georgetown University.

LATIE (1990). "Decentralization in Chile: Country Report." *Decentralization to Local Government in LAC: National Strategies and Local Response in Planning, Spending, and Management*.

Martínez, Javier and Alvaro Díaz (1996). *Chile: The Great Transformation.* Harrisonburg, VA: R. R. Donnelley & Sons, Inc.

Ministereo de Salud (1997). "Evaluación de la Atención Primaria." Division de Salud de las Personas, Departamento de Atención Primaria..

Miranda, Ernesto, ed. (1994). *La Salud en Chile: Evolución y Perspectivas.* Santiago: Centro de Estudios Públicos.

_____ (1990). "Descentralización y privatización del sistema de salud chileno." *Estudios Públicos* 39: 5-66.

Montoya-Aguilar, C. and Luis Marchant-Cavieres (1994). "The effect of economic changes on health care and health in Chile." *International Journal of Health Planning and Management* 9(4): 279-94.

_____ and Patrick Vaughan (1990). "Decentralization and local management of the health system in Chile." In *Health System Decentralization*, Anne Mills et al., eds. (pp. 55-63). Geneva: World Health Organization.

Nickson, R. Andrew (1995). *Local Government in Latin America.* Boulder, CO: Lynne Rienner Publishers, Inc.

Parry, Taryn (1997). " Achieving balance in decentralization: a case study of education decentralization in Chile." *World Development* 25(2): 211-25.

Pizarro, Crisóstomo, Dagmar Raczynski, and Joaquín Vial (1996). *Social and Economic Policies in Chile's Transition to Democracy.* Santiago: UNICEF.

Raczynski, Dagmar (1994). "Social policies in Chile: origins, transformation, and perspectives." *Kellog Institute, Democracy and Social Policy Series, Working Paper* #4 (Fall 1994).

_____ and Claudia Serrano (1988). "Descentralización y planificación local: la experienceia de municipios en comunas pobres de Santiago." *CIEPLAN Notas Técnicas* 108 (Jan. 1988).

Reichard, Stephen (1996). "Ideology drives health care reforms in Chile." *Journal of Public Health Policy* 17(1): 83-98.

Sagaris, Lake (1991). "Some optimism returns to Chile's health care system, but many problems remain." *Canadian Medical Association Journal* 144: 1157.

_____ (1987). "Health care in Chile: doctors take on a declining system." *Canadian Medical Association Journal* 136: 174.

Scarapaci, Joseph (1987). "HMO promotion and the privatization of health care in Chile." *Journal of Health Politics, Policy, and Law* 12(3): 551-67.

Secretaría de Desarrollo y Asistencia Social (1988). *Traspaso de Establecimientos Primarios de Salud a las Municipalidades* (Santiago, January 1988).

SUBDERE (1996). "Aspectos financieros de la salud municipalizada.". *Documento de Trabajo No. 4 (julio 1996)* Santiago: Ministerio del Interior, Subsecretaria de Desarrollo Regional y Administrativo.

World Bank (1993). *Chile: Subnational Government Finance.* Washington, DC: International Bank for Reconstruction and Development.

COLOMBIA

Banco Interamericano de Desarrollo (BID)(1998). "Descentralización en Colombia: nuevos desafíos." Series de Estudios Económicos y Sectoriales, RE-98-002, Enero 1998.

Bossert, Thomas (1998). "Analyzing the decentralization of health systems in developing countries: decision space, innovation, and performance." *Social Science and Medicine,* 47(10): 1513-27.

_____, Mukesh Chawla, Diana Bowser, Ursula Giedion, José Jesus Arbelaez, and Alvaro Lopez (2000). *Applied Research on Decentralization of Health Systems in Latin America: Colombia Case Study.* Data for Decision Making Project. Boston: Harvard School of Public Health.

_____, W. Hsiao, M. Barrera, L. Alarcon, M. Leo, and C. Casares (1998). "Transformation of ministries of health in the era of health reform: the case of Colombia." *Health Policy and Planning* 13(1): 59-77.

Castañeda, Tarsicio (1995). "La descentralización en Colombia: aspectos críticos y algunas lecciones." Unpublished manuscript, presented at the Seminar "La Reforma del Estado en Peru," Lima, Peru, June 1995.

_____ (1994). Elementos críticos de la descentralización en salud y educación en Colombia. Unpublished manuscript.

Collins, C.D., (1988). "Local government and urban protest in Colombia." *Public Administration & Development* 8: 421-36.

Correa, P. and R. Steiner (1994). "Decentralization in Colombia: recent changes and main challenges." Paper presented at Second Conference on the Colombian Economy, Lehigh University, 19-21 October 1994.

Departamento Nacional de Planeación (1995). "Cómo va la descentralización?" *Planeación & Desarollo* Vol.XXVI, No. 2, mayo 1995. Bogotá: Departamento Nacional de Planeación.

Duran, E. W., (1995). *La descentralización, el gasto social y la gobernabilidad en Colombia.* Bogota: Departamento Nacional de Planeación.

Fizbein, Ariel (1997). "The emergence of local capacity: lessons from Colombia." *World Development* 25(7): 1029-43.

González, Edgar (1995). Regulación, competencias y gestión descentralizada de los proyectos de vías, agua potable y saneamiento básico, educación y salud: el caso de Colombia. Santiago: Instituto Latinoamericano y del Caribe de Planificación Económica y Social.

Grindle, Merilee S., (1998). *Audacious Reforms: Institutional Invention and Democracy in Latin America*. Unpublished draft manuscript.

Harvard School of Public Health (1996). "Report on Colombia health sector reform and proposed master implementation plan." Final Report, Colombia Health Sector Reform Project, August 1996.

Jaramillo, Ivan Perez (1997). "La descentralización en Colombia." Project report, "Descentralización y Transformación de Sistemas de Salud," Ministerio de Salud/OMS/Harvard/FESCOL.

Londoño, Juan Luis (1996). "Managed competition in the tropics?" Unpublished paper presented at the World Conference on Health Economics, Canada, May 1996.

Ministerio de Salud (1996). "Estudio evaluativo del proceso de descentralización en Colombia." Project report, Ministerio de Salud/OMS/Harvard/FESCOL.

Nelson, Joan M. ,(1998). "The political economy of Colombia's health reforms of 1993." Unpublished draft manuscript, prepared for IDB/IDRC Research Program on "Processes of Reform in Education and Health: Design, Implementation, and Interests Groups".

O'Neill, Kathleen (1999). *Decentralization in the Andes: Power to the People or Party Politics?* Ph.D. dissertation. Cambridge: Harvard University.

Pan American Health Organization (PAHO)(1998). "Colombia." In *Health in the Americas, 1998 Edition, Volume II*, pp. 181-193 (www.paho.org).

Pedraza, A., H. Lopez, and C. Vargas (1995). "Propuesta de modificación de la ley 60 de 1993 para el sector salud." Unpublished report from COECI Ltda to the Colombian Ministry of Health under the "Consultoría sobre el estado financiero del sector salud y la reforma de la ley 60 de 1993."

Robertson, Robert L. and Peter Berman (1997). "National Health Accounts In Colombia." Boston: Harvard Program in Health Care Financing, Revised Final Report.

Vancott, Donna Lee (1998). *Constitution-Making and Democratic Transformation in Latin America: the Bolivian and Colombian Constitutional Reforms*. Ph.D. Dissertation, Georgetown University.

Wiesner Duran, E.,(1995). *La Descentralización, el Gasto Social y la Gobernabilidad en Colombia.* Bogotá: Departamento Nacional de Planeación.

_____ (1994). "Colombia: toward increased efficiency and equity in the health sector. Can decentralization help?" Report No. 11933-CO.

Yepes Luján, Francisco José and Luz Helena Sànchez Gómez (1999). *La Descentralizacóon de la Salud en Colombia.* Bogotá: ASALUD.

BOLIVIA

Bossert, Thomas, Fernando Ruiz Meir, Scarlet Escalante, Marina Cardenas, Bruno Giussani, Katherina Capra, Joel Beauvais, and Diana Bowser (2000). *Applied Research on Decentralization of Health Systems in Latin America: Bolivia Case Study*. Data for Decision Making Project. Boston: Harvard School of Public Health.

Center for International Health Information (CIHI)(1996). *CIHI Country Health Profile: Bolivia* (www.cihi.com).

Dennis, Marie 1997. Bolivia: the social consequences of debt. *NACLA Report on the Americas* 31(3): 37-43.

Exeni, Jose Luis, and Carlos Toranzo Roca. eds., (1993). *Hacia un Sistema de Salud Descentralizado.* La Paz: ILDIS.

Exeni, Jose Luis, and Carlos Toranzo Roca. eds., (1994). *La Descentralización de la Salud: Antecedentes y Perspectivas.* La Paz: ILDIS.

Gálvez Ríos, Modesto (1995). *Participación, Planificación y Proceso de Municipalización.* Potosí: Grupo DRU.

Gray Molina, George and Carlos Hugo Molina (1996). *Popular Participation and Decentralization in Bolivia: Building Accountability from the Grassroots.* Harvard Institute for International Development (HIID), Harvard University.

Jones, James (1997). "Development: reflections from Bolivia." *Human Organization* 56(1): 111-20.

Martinez, Javier 1996. *Decentralization and Health Systems Change in Bolivia*. Manuscript.

Nickson, R. Andrew (1995). *Local Government in Latin America.* Boulder, CO: Lynne Rienner Publishers.

O'Neill, Kathleen (1999). *Decentralization in the Andes: Power to the People or Party Politics?* Ph.D. dissertation. Cambridge: Harvard University.

Pelaez Gantier, Gabriel (1995). *Descentralización: Mito o Realidad?* La Paz: Editorial Jurídica Zegada.

Rosenbaum, Allan (1998). "Strengthening civil society and local democracy through national initiatives: the case of Bolivia's 'Popular Participation Law.'" *International Review of Administrative Sciences* 64(1): 133-36.

Ruiz, Fernando, and Bruno Giusanni (1997). *El proceso de descentralización y financiamiento de los servicios de educación y salud en Bolivia*. Seminario Regional Descentralización de los Servicios de Educación y Salud, Puebla 24-26 March 1997.

Toranzo Roca, Carlos, ed., (1994). *Reflexiones Sobre la Descentralización.* La Paz: ILDIS.

Vancott, Donna Lee (1998). *Constitution-Making and Democratic Transformation in Latin America: the Bolivian and Colombian Constitutional Reforms*. Ph.D. Dissertation, Georgetown University.

ANNEX 1. TABLES

Table 1. Colombia: Promotion and Prevention Expenditure per Capita per Income Decile, adjusted according to the consumer price index for 1997

DECILES	1994	1995	1996	1997
	PPE PER CAPITA	PPE PER CAPITA	PPE PER CAPITA	PPE PER CAPITA
1	3.21	3.09	4.15	5.44
2	1.93	3.14	5.13	4.53
3	2.55	3.40	4.07	5.76
4	2.52	2.63	3.27	5.47
5	2.33	3.63	4.71	7.03
6	2.26	3.09	4.25	5.84
7	3.07	2.69	4.09	6.28
8	2.33	3.14	4.25	6.19
9	2.29	2.70	4.54	5.74
10	4.33	2.91	4.86	5.97
AVERAGE	2.67	3.04	4.33	5.83
$10^{TH}/1^{ST}$	1.35	0.94	1.17	1.10

Source: MOH

Table 2. Colombia: OLS for Prevention and Promotion Expenditure per capita for years 1994 - 1997

MODEL #1	1994 (N=695)		1995 (N=808)		1996 (N=914)		1997 (N=867)	
INDEPENDENT VARIABLES	COEFF.	Z	COEFF.	Z	COEFF.	Z	COEFF.	Z
CONSTANT	.60674	0.93	2.6129*	2.99	4.469*	3.59	25.59**	1.22
MUNICIPALITY CERTIFICATION	-.572**	-1.81	-.83581*	-2.64	.16078	0.35	.24167*	4.45
DEPARTMENT CERTIFICATION	-.459**	-1.81	.206182	0.32	-.6158**	-1.56	-1.27*	-2.01
MONTHS DEPT CERTIFIED	.0271	0.65	-.02599	-0.71	.00933	0.67	.0335**	1.64
MONTHS MUN CERTIFIED	.10645	1.16	.08296**	3.13	.05382*	2.14	.2417*	4.45
EXTERNAL RESOURCES	.1215*	2.05	-.03185	-0.40	-.00971	-0.09	-1.514*	-3.68
OWN RESOURCES	-.0194	-1.11	-.01167	-0.61	-.008212	-0.35	.13158*	3.15
POPULATION/10000	----	----	----	----	----	----	----	----
% URBAN	-.590**	-1.56	.03189	0.063	-1.0347*	-2.14	-2.190*	-2.16
R^2	0.0100	----	0.0102	----	0.0096	----	0.1105	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

Table 3. Chile: Medical Inputs (1994)

	MEDICAL HOURS CONTRACTED	MEDICAL HOURS FOR EVERY 1,000 BENEFICIARIES	PHYSICIANS SALARIES
Average	243.0	9.21	599.9
MEAN	77.0	7.48	556.3
VARIATION. COEFFICIENT	1.48	0.63	0.41
GINI COEFFICIENT	0.63	0.32	0.17
90/10	25.1	3.71	1.82
50/10	2.33	2.13	1.27
75/25	5.63	1.93	1.30
# OBSERVATIONS	212	210	212

Source: Prepared based on Ministry of Health information

Table 4. Colombia: Health Sector Human Resources (1994)

HOURS CONTRACTED	ADMINISTRATIVE CONTRACT	ADMINISTRATIVE CIVIL	CLINICAL CONTRACT	CLINICAL CIVIL
AVERAGE	6.9	63.9	7.9	82.4
STANDARD DEV.	10.3	230.7	13.5	237.6
90/20	3.2	8.14	2.7	9.0
50/20	1.05	4.08	1.2	2.6
# OBSERVATIONS	225	538	193	536

Source: MOH

Table 5. Colombia: Human Resource Inputs (1997)

HOURS CONTRACTED	ADMINISTRATIVE ON CONTRACT	ADMINISTRATIVE ON CIVIL SERVICE	CLINICAL CONTRACT	CLINICAL CIVIL SERVICE
AVERAGE	16.1	66.7	14.0	94.9
STANDARD DEV.	59.0	217.4	45.5	267.2
90/20	5.3	5.4	2.5	5.1
50/20	1.6	1.6	0.8	1.2
# OBSERVATIONS	414	563	395	564

Source: MOH

Table 6. Colombia: OLS for Contract Personnel/ Total Personnel, 1994 - 1997

MODEL #1	1994 (N=251)		1995 (N=291)		1996 (N=396)		1997 (N=429)	
INDEPENDENT VARIABLES	COEFF.	Z	COEFF.	Z	COEFF.	Z	COEFF.	Z
CONSTANT	.6456*	5.88	.2109**	-1.77	.79528	5.11	.92846*	6.17
MUNICIPALITY CERTIFICAT'N	-.0543**	-1.84	-.0745**	-1.77	.0763*	2.31	.0630*	2.59
DEPARTMENT CERTIFICATION	.0491*	2.13	.05943	1.16	.02544	0.99	.0499*	2.32
MONTHS DEPT CERTIFIED	-.0084*	-3.03	-.00075	-0.27	-.0013**	-1.59	-.0030*	-3.70
MONTHS MUN CERTIFIED	.0095*	2.42	.00421**	1.77	-.00313*	-2.55	-.0003	-0.24
EXTERNAL RESOURCES	-.04825*	-5.79	-.0129**	-1.62	-.05553*	-4.19	-.0639*	-5.33
OWN RESOURCES	.0038**	1.53	.00491**	1.70	.00562**	1.63	.0066*	2.43
MANAGED CARE	----	----	----	----	.0000004	0.22	.000009	1.41
POPULATION	-.00003	-0.21	-.0003**	-1.51	.0002	0.19	-.00083	-0.86
% URBAN	.10163*	2.19	.01838	0.48	.1016*	2.75	.1183*	3.01
R^2	0.1621	----	0.0823	----	0.0959	----	0.1306	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

Table 7. Chile: Determination of Municipal Primary Health Care Activities

	(1) LINEAR	(2) LINEAR	(3) LOG	(4) LOG
EXPENDITURE BY BENEFICIARY	0.292*	0.183*	0.634*	0.470*
RURAL POPULATION RATE	2.24*	---	0.286*	
MUNICIPAL MODALITY FOR ADMINISTRATION	-1.22*	-0.780	-0.196*	-0.136*
CONSTANT	2.24*	5.098*	-4.25*	-2.480*
GROUP 2		-0.925		-0.155*
GROUP 3		2.420*		0.172
GROUP 4		-0.345		-0.095
GROUP 5		-1.507*		-0.196*
GROUP 6		-2.240*		-0.318*
ADJUSTED R2	0.24	0.23	0.28	0.27
NUMBER OBSERVED	234	258	234	258

Note: Regression coefficients are reported.
*Significant to within 5%

Table 8. Colombia: OLS for the Utilization of Health Care Services per Capita for years 1994 - 1997

MODEL #1	1994 (N=613)		1995 (N=616)		1996 (N=578)		1997 (N=594)	
INDEPENDENT VARIABLES	COEFF.	Z	COEFF.	Z	COEFF.	Z	COEFF.	Z
CONSTANT	.6510*	8.39	5.409*	7.99	3.450*	4.18	3.334*	9.57
MUNICIPALITY CERTIFICAT'N	-.2050*	-2.18	12.95	1.05	-1.355*	-2.75	-.0307	-0.68
DEPARTMENT CERTIFICATION	.1127*	2.36	-1.143	-0.40	-1.296**	-1.99	-.3552*	-4.93
MONTHS DEPT CERTIFIED	-.0075	-1.19	.1009	0.61	.0294	1.29	.0053*	3.65
MONTHS MUN CERTIFIED	.0033	0.25	-.6042	-1.133	.0650*	3.09	.0062*	2.71
EXTERNAL RESOURCES	-.0113**	-1.66	.0028	0.07	.0054	0.09	-.2009*	-7.17
OWN RESOURCES	.0231*	10.62	.1685*	5.50	-.0555	-1.35	.0506*	7.93
MANAGED CARE	----	----	----	----	-.0001*	-2.08	-0.0000	-1.24
POPULATION	----	----	----	----			----	----
% URBAN	-.3282*	-5.73	-4.680*	-3.56	-.8032	-0.77	-.3832*	-4.27
R^2	0.1181	----	0.1153	----	0.0290	----	0.1685	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

Table 9. Bolivia: Correlation Matrix of Performance Indicators

	ASSIGNED EFF.	EFF OF PROVIS.	UTILIZATION	QUALITY	EQUITY
A-C	0.543	---	---	---	---
A-M	0.576	0.756	---	0.751	---
M-C	---	---	0.598	---	0.687
KNOWLEDGE OF LAW (MAYOR)	0.556	---	---	---	---
RESPECT FOR LAW (MAYOR)	0.828	0.731	0.521	0.722	0.602
INITIATIVE (MAYOR)	0.726	0.593	0.579	0.544	0.554
SENSIBILITY (DOCTOR)	0.510	---	0.679	---	0.552
DILOS FUNCT'S	---	0.666	0.579	0.649	0.613
INNOV.	0.535	---	0.584	---	0.764

Table 10. Chile: Efficiency in Municipal Health Management

	ALL	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6
RURAL POPULATION	0.301*	0.075	-0.091	0.798*	0.050	0.056	0.672*
VULNERABILITY	-0.001*	0.000	0.003	-0.004	-0.006*	-0.002	-0.001
REGISTRATION	0.160*	0.092	0.203*	-0.437*	0.426*	0.010	0.016*
CONSTANT	0.376*	0.426*	0.179*	1.027	0.724*	0.055*	0.031*
ADJUSTED R2	0.06	-0.02	0.09	-0.07	0.28	-0.24	0.27
NUMBER OBSERVED	232	93	31	13	48	13	34

Note: Regression coefficients are reported.
*Significant to within 5%

Table 11. Colombia: OLS for Efficiency of Health Care Utilization 1994 - 1997

MODEL #1	1994 (N=611)		1995 (N=616)		1996 (N=585)		1997 (N=592)	
INDEPENDENT VARIABLES	COEFF.	Z	COEFF.	Z	COEFF.	Z	COEFF.	Z
CONSTANT	-21.80*	-2.91	-52.66*	-2.15	-130.98	-2.69	-1742.822	-3.622
MUNICIPALITY CERTIFICAT'N	-23.91	-0.58	-71.63*	-2.04	7.31	0.32	108.00	1.28
DEPARTMENT CERTIFICATION	-11.04	-1.19	-14.88	-0.20	-16.92	-0.53	41.69	1.05
MONTHS DEPT CERTIFIED	-1.80	-1.49	.00018	0.00	-1.96*	-2.16	-2.64*	-2.23
MONTHS MUN CERTIFIED	8.20**	1.50	6.37*	2.02	1.89	0.48	-3.63	-0.69
EXTERNAL RESOURCES	3.26*	6.82	4.85*	3.68	12.97*	3.38	133.04*	3.82
OWN RESOURCES	1.84*	5.99	3.09*	5.76	1.07	0.94	-3.65	-1.20
MANAGED CARE	----	----	----	----	.0046**	1.59	-.0053	-1.06
POPULATION	.3677	0.78	.7359	0.89	-2.78	-1.49	6.92	0.93
% URBAN	49.43*	3.96	89.99*	2.95	177.33*	3.14	126.76*	2.45
R^2	0.2663	----	0.1353	----	0.1242	----	0.1530	----

* $|z| > 2.00$ ** $1.5 < |z| < 2.00$

ANNEX 2. COUNTRY DATA SOURCES

CHILE

The current study is based on both national level data analysis and five case studies of specific municipalities. In this section we review the national level data that was collected and analyzed for this project. The national level data base was created covering the period from 1990-1996 and including 318 of the country's 334 municipalities, the smallest 16 having been excluded from the study. Data was obtained primarily from the Primary Care Department of the Ministry of Health and covers both regular information collected by the Ministry of Health and financial information provided by the municipal governments via the Subsecretariat for Regional Development (SUBDERE) within the Ministry of the Interior. The variables that were available included basic data on municipal characteristics such as size, rurality, socio-economic vulnerability, as well as data on financing from central and municipal sources, expenditures within the health sector, utilization of health services, human resources (hours and salaries), and institutional capacity. Other data sources were either not in a compatible form or could not be obtained for the project.

In Chile, case studies of five municipalities were selected to attempt to evaluate in more detail the differences between centralized and decentralized municipalities. We had hoped to assess this difference through national level data and when this was found to be impossible due to data limitations in the centralized municipalities, we focused the case studies on this issue. We selected the three cases of municipalities where the central authorities, through the Regional Health Offices, were the sole providers of primary care: Santiago, Maipu and nine municipalities in the Region of Aysen Two of these areas had had an initial period of decentralized responsibility but both had been returned to the Regional Health Office responsibility. Maipu had been under central control and never decentralized. We compared these communities with two similar areas which were decentralized: Concepcion which like Santiago is a large city, and eight municipalities in the Region of Nuble which is a dispursed rural area like Aysen. An initial attempt to select the cases on the basis of additional national level data did not result in meaningful comparative cases.

The case histories were prepared by an interviewer with long experience in the health sector. The interviews were with officials from the local health offices, the Regional Health Office, the municipalities, and other observers. Interviews generally lasted over one hour.

COLOMBIA

The data we used were gathered in Colombia from several national sources. The National Statistics Office provided the data on municipal population, urbanization, poverty level, and economic level. The Office of the Ministry of Health provided the data on which municipalities and which departments had been certified (including the exact date of certification), what type and the quantity of health care services are

offered in each municipality, human resource data, hospital funding and expenditure information, and the number of residents enrolled in the subsidized national health insurance program funded by FOSYGA. The Inter-American Development Bank provided the data on number and type of health care facilities found in each municipality. Information was gathered over the four years 1994-1997.

This information was first subjected to single variable analysis, followed by a more in-depth description of possible cause-effect relationships using multiple variable regression analysis. The results of this national level quantitative analysis were to be complemented in a second phase of individual case studies as has been done in companion studies in Chile and Bolivia. The increasing security problems in Colombia made it imprudent to launch this second phase of the research. Nevertheless, we have been able to take advantage of a case study done by Francisco Yepes and Luz Helena Sánchez Gómez (1999) that provides a qualitative analysis of decentralization.

Their study conducted interviews with key informants in 11 certified and 11 uncertified municipalities using a structured interview guide that was analyzed using The Ethnograph Program. The key informants included administrative personnel (the mayor and person in control of the identification system for subsidiary beneficiaries called SISBEN); council members (three council members from each municipality that were interested in health and had differing view points); ombudsman (usually a lawyer who worked in defense of the community and was selected by the council members); members of health related social organizations (the Empresas Sociales del Estado's "junta directiva", health committees, watch groups, and Empresas Solidarias de Salud workers); and members of the Public Health Service Network (Hospital and ESS Directors and official statisticians).

BOLIVIA

The national level data base was created covering the period from 1994-1996 and including 101 variables from all of the 312 municipalities. The data covered utilization, expenditures, socio-economic variables and health indicators. Data was obtained primarily from the a number of different sources, the majority of which are not easily accessible to the public. The information related to investments in health by municipalities was obtained from the National System of Investments under the Ministry of Housing. The expenditure data was obtained from the General Controller of the Republic. The information on health indicators was supplied by the National Health Information System of the Ministry of Health and Social Provisions. Information on popular participation came from the Ministry of Sustainable Development and Planning. Population and poverty figures were gathered from the National Census on Population and Living from 1992 and the Poverty Map from 1995. On analysis of this data we found a large number of missing data points, inconsistencies and a bias toward a few unrepresentative municipalities with consistent data.

The limitations in the national secondary information led us to collect data for more case study municipalities. We developed a "Work Plan" for 17 municipalities, in three departments (La Paz, Cochabamba, and Santa Cruz). Due to financial limitations, we selected municipalities that were accessible in three circuits, one for each department. We prioritized those municipalities whose size and socioeconomic

characteristics would be the most representative of the realities of the country, mainly small, rural municipalities.

Using teams of experienced interviewers and a detailed interview guide, we interviewed local municipal actors involved in the health sector. The interviews included mayors, major officials, and those responsible for the health of the area, councilors, and representatives of the DILOS, directors of the main public health facilities of each municipality, doctors, nurses, health auxiliaries, and facility administration, representatives of the Oversight Committees andof the OTBs, patients, and persons from the general population.

ANNEX 3. DETAILED DECISION-SPACE MAPS

CHILE

Map 1. Formal Decision Space Map of Primary Health Care in Chilean Municipalities in 1988

FUNCTIONS	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
FINANCE			
SOURCES OF REVENUE		EARMARKED CENTRAL TRANSFER (FAPEM) NEGOTIATED WITH MUNICIPALITY FREEDOM TO PROVIDE LOCAL FINANCING CONSTRAINED BY SCARCITY OF FREELY AVAILABLE MUNICIPAL FUNDS	
EXPENDITURES			ALLOCATION OF EXPENDITURES ACCORDING TO LOCAL CRITERIA (SUBJECT TO TECHNICAL PROVISION NORMS)
INCOME FROM FEES	NO FEES FOR MUNICIPAL SERVICES		
SERVICE ORGANIZATION			
HOSPITAL AUTONOMY	NOT APPLICABLE		
INSURANCE PLANS	NO SEPARATE INSURANCE		
PAYMENT MECHANISMS		SALARY BONUSES ALLOWED	
REQUIRED PROGRAMS & NORMS	DETERMINED BY SNSS		
HUMAN RESOURCES			
SALARIES			BROAD FREEDOM TO SET SALARIES AND DECIDE UPON CONTRACTING ACCORDING TO LOCAL REALITY AND RESOURCES
CONTRACTS			
CIVIL SERVICE			MUNICIPAL STAFF COVERED BY PRIVATE CONTRACTING LAW
ACCESS RULES			
TARGETING	FREE ACCESS FOR PUBLIC HEALTH SYSTEM BENEFICIARIES		
GOVERNANCE RULES			
LOCAL GOVERNMENT	MAYORS DIRECTLY APPOINTED BY PRESIDENT		
FACILITY BOARDS		3 OPTIONS FOR PRIMARY HEALTH CARE FACILITY GOVERNANCE AND HEALTH OFFICES	
HEALTH OFFICES			
COMMUNITY PARTICIPATION			COMMUNITY PARTICIPATION AT DISCRETION OF MUNICIPALITY

Map 2. Formal Decision-Space Map of Primary Health Care in Chilean Municipalities in 1996

Functions	Range of Choice		
	Narrow	Moderate	Wide
Finance			
Sources of Revenue		Earmarked central transfer (FAPEM) negotiated with municipality	Freedom to provide local financing (constrained only by available municipal funds)
Expenditures		Allocations limited by salary and hiring constraints since salary expenditures are high proportion of PHC expenditures.	
Income from Fees	No fees for municipal services		
Service Organization			
Hospital Autonomy	Not applicable		
Insurance Plans	No separate insurance		
Payment Mechanisms		Salary Bonuses Allowed	
Required Programs & Norms	Determined by SNSS		
Human Resources			
Salaries	New Statute established central norms for salaries		
Contracts		Contracts limited by Statute	
Civil Service	Statute establishes new civil service for municipal health workers		
Access Rules			
targeting	Free access for public health system beneficiaries		
Governance Rules			
Local			Mayors elected
Government			
Facility Boards		3 options for primary health care facility	
Health Offices		governance and health offices	
Community Participation			Community participation at discretion of municipality

BOLIVIA

Map 3. Local Decision Space: Municipal Government after Popular Participation Law (1994)

FUNCTION	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
FINANCE			
SOURCES OF REVENUE			MUNICIPALITY CAN ASSIGN BETWEEN 0-60% OF CO-PARTICIPATION RESOURCES TO HEALTH. NO RESTRICTION ON ASSIGNMENT OF LOCAL TAX REVENUES TO HEALTH.
EXPENDITURE ALLOCATION		NON-SALARY EXPENDITURES RELATIVELY UNRESTRICTED, BUT NO CONTROL OVER SALARY AND CANNOT SPEND MORE THAN 15% OF COPARTICIPATION IN CONTRACT SALARIES.	
INCOME FROM FEES & CONTRACTS		FACILITIES CAN ESTABLISH OWN FEES WITHIN RANGES APPROVED BY MOH	
SERVICE ORGANIZATION			
HOSPITAL AUTONOMY		UNCLEAR RULES OVER MUNICIPAL HOSPITAL MANAGEMENT STRUCTURE ALLOWS SOME VARIATION	
INSURANCE PLANS	NO LOCAL INSURANCE FOR PUBLIC FACITITIES		
PAYMENT MECHANISMS		SALARY PAID BY CENTRAL GOVERNMENT THROUGH REGIONAL OFFICES. PAYMENT TO FACILITIES FOR NON-SALARY ITEMS HAS WIDE RANGE.	
CONTRACTS WITH PRIVATE PROVIDERS		LIMITED PRIVATE CONTRACTS ARE ALLOWED	
REQUIRED PROGRAMS AND SERVICE NORMS		SERVICE NORMS DEFINED BY MOH BUT ALLOW MODERATE LOCAL CHOICE WITHIN THE NORMS	
HUMAN RESOURCES			
SALARIES	SALARY LEVELS AND PAYMENTS DETERMINED BY REGIONAL OFFICE OF MOH, MINOR PARTICIPATION OF LOCAL COMMUNITY IN HIRING AND FIRING		
CONTRACTS	LITTLE OR NO CONTRACTING OF NON-PERMANENT PERSONNEL; ANY CONTRACTING DETERMINED BY REGIONAL OFFICES OF MOH		
CIVIL SERVICE	CENTRALLY ADMINISTERED UNIFIED CIVIL SERVICE		

Map 3. Local Decision Space (cont.)

ACCESS RULES			
TARGETING			ONLY MINOR TARGETING BY CENTRAL AUTHORITIES
GOVERNANCE RULES			
LOCAL GOVERNMENT			DEMOCRATICALLY ELECTED MUNICIPAL GOVERNMENTS
FACILITY BOARDS	NO FACILITY BOARDS		
HEALTH OFFICES	POPULAR PARTICIPATION LAW DEFINES ROLES OF MUNICIPAL GOVERNMENT, DILOS, AND HEALTH FACILITIES		
COMMUNITY PARTICIPATION	COMMUNITY PARTICIPATION IN MUNICIPAL GOVERNMENT THROUGH OTBS AND VIGILANCE COMMITTEES AND IN DILOS – DETERMINED BY NATIONAL LEVEL LAW		

Map 4. Bolivia Formal Decision Space after Maternal and Child Health Insurance (1996)

Function	Range of Choice		
	Narrow	Moderate	Wide
Finance			
Sources of revenue		Municipalities are "forced" to assign 3.2% of their co-participation resources to a specific benefits package for health. No restriction on assignment of local tax revenues to health	
Expenditure allocation		Non-salary expenditures relatively unrestricted, but no control over salary and cannot spend more than 15% of coparticipation in contract salaries.	
Income from fees & contracts	Facilities required to provide free basic package of benefits for mothers and children. For other services , facilities are allowed to establish fees within ranges approved by MOH		
Service Organization			
Hospital autonomy		Unclear rules over municipal hospital management structure allows some variation	
Insurance plans	No local insurance for public facitities		
Payment mechanisms		Salary paid by central government through regional offices. Payment to facilities for non-salary items has wide range.	
Contracts with private providers		Limited private contracts are allowed	
Required Programs and service norms	Service norms for basic package of maternal and child health more specifically defined by MOH.		
Human Resources			
Salaries	Salary levels and payments determined by Regional Office of MOH, minor participation of local community in hiring and firing		
Contracts	Little or no contracting of non-permanent personnel; any contracting determined by Regional Offices of MOH		
Civil service	Centrally administered unified civil service		

MAP 4. BOLIVIA FORMAL DECISION SPACE (CONT.)

ACCESS RULES			
TARGETING	MOTHERS AND CHILDREN TARGETTED BY MOH SEGURO PROGRAM.		
GOVERNANCE RULES			
LOCAL GOVERNMENT			DEMOCRATICALLY ELECTED MUNICIPAL GOVERNMENTS
FACILITY BOARDS	NO FACILITY BOARDS		
HEALTH OFFICES	POPULAR PARTICIPATION LAW DEFINES ROLES OF MUNICIPAL GOVERNMENT, DILOS, AND HEALTH FACILITIES		
COMMUNITY PARTICIPATION	COMMUNITY PARTICIPATION IN MUNICIPAL GOVERNMENT THROUGH OTBS AND VIGILANCE COMMITTEES AND IN DILOS – DETERMINED BY NATIONAL LEVEL LAW		

COLOMBIA

Map 5. Decision-Space Map for Colombian Municipalities prior to Certification

FUNCTIONS	RANGE OF CHOICE		
	NARROW	MODERATE	WIDE
FINANCE			
SOURCES OF REVENUE	EARMARKED INTERGOVERNMENTAL TRANSFER: PERCENTAGE OF "MUNICIPAL PARTICIPATION" AND OTHER LOCAL TAXES "FORCED" TO BE ASSIGNED TO HEALTH.		
EXPENDITURES	DEPARTMENTAL CONTROL OF *SITUADO FISCAL* EXPENDITURES		
INCOME FROM FEES		FACILITIES DETERMINE AND RETAIN FEES -- MUNICIPAL PARTICIPANTS ON BOARDS INFLUENCE DECISIONS	
SERVICE ORGANIZATION			
HOSPITAL AUTONOMY	HOSPITAL AUTONOMY DEFINED BY NATIONAL LAW -- NO CHOICE AT MUNICIPAL LEVEL		
INSURANCE PLANS	SOCIAL INSURANCE SYSTEM DEFINED BY NATIONAL LAW		
PAYMENT MECHANISMS	MOST FUNDING IS DIRECT BUDGET PAYMENTS TO PUBLIC PROVIDERS		
REQUIRED PROGRAMS & NORMS	DETERMINED BY MINISTRY OF HEALTH		
HUMAN RESOURCES			
SALARIES	SALARY SCALES DETERMINED BY MOH IN NEGOTIATION WITH UNIONS		
CONTRACTS		USE OF CONTRACT EMPLOYEES ALLOWED BUT IN PRACTICE RESTRICTED	
CIVIL SERVICE	NEW NATIONAL CIVIL SERVICE HIRING AND FIRING RULES IMPOSED WITH GRAND FATHERED PROTECTION FOR CURRENT EMPLOYEES		
ACCESS RULES			
TARGETING	SISBEN MEANS TEST DEFINED NATIONALLY AND REQUIRED TO BE IMPLEMENTED BY MUNICIPALITIES		
GOVERNANCE RULES			
LOCAL GOVERNMENT			MAYORS DIRECTLY ELECTED
FACILITY BOARDS	NONE		
HEALTH OFFICES	MUNICIPAL OFFICES TRANSFERRED FROM DISTRICT OFFICES OF MOH		
COMMUNITY PARTICIPATION			COMMUNITY PARTICIPATION AT DISCRETION OF MUNICIPALITY

Map 6. Formal Decision-Space Map of Colombian Municipalities after Certification

Functions	Range of Choice		
	Narrow	Moderate	Wide
Finance			
Sources of Revenue		*Situado Fiscal* earmark allows range of choice of assignment to health and education.	
Expenditures		Assignment earmarks for "demand side subsidy" to insurers and set aside for PAB (promotion and prevention)	
Income from Fees		Facilities determine and retain fees -- municipal participants on boards influence decisions	
Service Organization			
Hospital Autonomy	Hospital autonomy defined by national law -- no choice at municipal level		
Insurance Plans	Social insurance system defined by national law		
Payment Mechanisms		Some payment mechanisms negotiated between facility and insurers (municipal participates on facility board). Direct budget payments determined by municipal government	
Required Programs & Norms	Determined by Ministry of Health		
Human Resources			
Salaries	Salary scales determined by MOH in negotiation with unions		
Contracts		Expanded use of contract employees	
Civil Service	New national civil service hiring and firing rules imposed with grandfathered protection for current employees		
Access Rules			
targeting	SISBEN means test defined nationally and required to be implemented by municipalities		
Governance Rules			
Local Government			Mayors directly elected
Facility Boards	None		
Health Offices	Municipal Offices transferred from District offices of MOH		
Community Participation			Community participation at discretion of municipality

ANNEX 4. INDICATORS FOR MAPPING DECISION SPACE

Function	Indicator	Range of Choice		
		Narrow	Moderate	Wide
Finance				
Sources of revenue	intergovernmental transfers as % of total local health spending	high %	mid %	low %
Allocation of expenditures	% of local spending that is explicitly earmarked	high %	mid %	Low %
Fees	range of prices local authorities are allowed to choose	no choice or narrow range	moderate range	No limits
Contracts	number of models allowed	none or one	several specified	no limits
Service Organization				
Hospital autonomy	choice of range of autonomy for hospitals	defined by law or higher authority	several models for local choice	no limits
	Insurance plans no limits	choice of how to design insurance plans	defined by law or higher authority	several models for local choice
Payment mechanisms	choice of how to providers will be paid (incentives and non-salaried)	defined by law or higher authority	several models for local choice	no limits
Required programs	specificity of norms for local programs	rigid norms	flexible norms	few or no norms
Human resources				
Salaries	change of salary	defined by law or higher authority	moderate salary range defined	no limits
Contracts	contracting non-permanent staff	none or defined by higher authority	several models for local choice	nolimits
Civil service	hiring and firing permanent staff	national civil service	local civil service	no civil service
Access rules				
Targeting	defining priority populations	law or defined by higher authorities	several models for local choice	no limits
Governance Rules				
Facility Boards	size and composition of boards	law or defined by local authority	several models for local choice	no limits
District offices	size and composition of local offices	law or defined by local authority	several models for local choice	no limits
Community participation	size, number, composition, and role of community participation	law or defined by local authority	several models for local choice	no limits

PUBLICATIONS OF THE LATIN AMERICA AND THE CARIBBEAN REGIONAL HEALTH SECTOR REFORM INITIATIVE

1. **Methodology for Monitoring and Evaluation of Health Sector Reform in Latin America and the Caribbean (English and Spanish)**
2. **Base Line for Monitoring and Evaluation of Health Sector Reform in Latin America and the Caribbean (English and Spanish)**
3. **Análisis del Sector Salud en Paraguay (Preliminary Version)**
4. **Clearinghouse on Health Sector Reform (English and Spanish)**
5. **Final Report – Regional Forum on Provider Payment Mechanisms (Lima, Peru, 16-17 November, 1998) (English and Spanish)**
6. **Indicadores de Medición del Desempeño del Sistema de Salud**
7. **Mecanismos de Pago a Prestadores en el Sistema de Salud: Incentivos, Resultados e Impacto Organizacional en Países en Desarrollo**
8. **Cuentas Nacionales de Salud: Bolivia**
9. **Cuentas Nacionales de Salud: Ecuador**
10. **Cuentas Nacionales de Salud: Guatemala**
11. **Cuentas Nacionales de Salud: México**
12. **Cuentas Nacionales de Salud: Perú**
13. **Cuentas Nacionales de Salud: República Dominicana (Preliminary Version)**
14. **Cuentas Nacionales de Salud: Nicaragua**
15. **Cuentas Nacionales de Salud: El Salvador (Preliminary Version)**
16. **Health Care Financing in Eight Latin American and Caribbean Nations: The First Regional National Health Accounts Network**
17. **Decentralization of Health Systems: Decision Space, Innovation, and Performance**
18. **Comparative Analysis of Policy Processes: Enhancing the Political Feasibility of Health Reform**
19. **Lineamientos para la Realización de Análisis Estratégicos de los Actores de la Reforma Sectorial en Salud**
20. **Strengthening NGO Capacity to Support Health Sector Reform: Sharing Tools and Methodologies**
21. **Foro Subregional Andino sobre Reforma Sectorial en Salud. Informe de Relatoría. (Santa Cruz, Bolivia, 5 a 6 de Julio de 1999)**
22. **State of the Practice: Public-NGO Partnerships in Response to Decentralization**
23. **State of the Practice: Public-NGO Partnerships for Quality Assurance**

24. **Using National Health accounts to Make Health Sector Policy: Finding of a Latin America/Caribbean Regional Workshop (English and Spanish)**
25. **Partnerships between the Public Sector and Non-Gobernmental Organizations Contracting for Primary Health Care Services. A State of the Practice Paper. (English and Spanish)**
26. **Partnerships between the Public Sector and Non-Gobernmental Organizations: The NGO Role in Health Sector Reform (English/Spanish)**
27. **Análisis del Plan Maestro de Inversiones en Salud (PMIS) de Nicaragua**
28. **Plan de Inversiones del Ministerio de Salud 2000-2002**
29. **Decentralization of Health Systems in Latin America: A Comparative Study of Chile, Colombia, and Bolivia (English and Spanish)**
30. **Guidelines for Promoting Decentralization of Health Systems in Latin America (English and Spanish)**
31. **Methodological Guidelines for Applied Research on Decentralization of Health Systems in Latin America**
32. **Applied Research on Decentralization of Health Care Systems in Latin America: Colombia Case Study**
33. **Applied Research on Decentralization of Health Care Systems in Latin America: Chile Case Study**
34. **Applied Research on Decentralization of Health Care Systems in Latin America: Bolivia Case Study**
35. **La Descentralización de los Servicios de Salud en Bolivia**
36. **Enhancing the Political Feasibility of Health Reform: A Comparative Analysis of Chile, Colombia, and Mexico (English and Spanish)**
37. **Guidelines for Enhancing the Political Feasibility of Health Reform in Latin America**
38. **Methodological Guidelines for Enhancing the Political Feasibility of Health Reform in Latin America**
39. **Enhancing the Political Feasibility of Health Reform: The Colombia Case**
40. **Enhancing the Political Feasibility of Health Reform: The Chilean Case**
41. **Enhancing the Political Feasibility of Health Reform: The Mexico Case**

SPECIAL EDITION

1. **Cuentas Nacionales de Salud: Resúmenes de Ocho Estudios Nacionales en América latina y el Caribe**
2. **Guía Básica de Política: Toma de Decisiones para la Equidad en la Reforma del Sector Salud**

To view or download any publications please go to the Initiative Web Page:

HTTP://WWW.AMERICAS.HEALTH-SECTOR-REFORM.ORG

and select "LACHSR Initiative Product Inventory"