UNDERSTANDING GOOD INSTITUTIONAL DESIGN IN HOSPITAL CORPORATIZATION: A DECISION RIGHTS APPROACH

Florence Eid*

American University in Beirut

Working Paper 2028

*I am grateful to my advisors from MIT and Harvard, Bengt Holmström, Karen Polenske and David Cutler for their excellent guidance. I have benefited from discussions with Susan Athey, William Cleverley, Lucy Goodhart, Pere Ibern, April Harding, Jamie Robinson, Nancy Kane, Nancy Rose, Meredith Rosenthal, Anwar Shah, and Steve Webb. I also wish to thank participants in the MIT Industrial Organizations Seminar for their helpful comments. This work would not have been possible without the support of Ministers of Health Karam Karam, Sleiman Franjieh and Marwan Hamadé in Lebanon as well as the Ford Foundation/LCPS Middle East Research Competition grant.

Abstract

Corporatization is a hybrid organizational form between public sector ownership and privatization that is increasingly being adopted in the social sectors. In the past ten years, hospital conversions from public to non-profit and from non-profit to for-profit have been common to both industrialized and developing countries. The debate surrounding these conversions has centered primarily around the tradeoff between equity and efficiency when comparing public with private provision of services. I argue that more important than this dichotomy is the creation of appropriate incentives, and the matching up of incentives with goals through institutional design. I draw on the decision rights approach to analyze how an innovative hospital in Lebanon corporatized itself and became the best in the public sector over a period of seven years. I study the hospital's experience by developing a Decision Rights Analysis Framework that tracks the formation, evolution and dilution of decision rights. Among the most interesting of the decision rights allocations made was the pairing of claimant and control rights to produce high-powered incentives for the director.

1. Introduction

Governments are turning to corporatization to improve efficiency and reduce costs in public hospitals. Corporatization is a hybrid organizational form that grants hospitals (varying) degrees of financial and managerial autonomy, through a corporate board, but retains public sector ownership of the hospitals. Lying mid-way along a continuum of hospital organizational boundaries, ranging from budgetary units to privatization, corporatization has become an increasingly common reform in response to changes in medical technology, know-how, and cost. Today, numerous industrialized and developing countries are experimenting with the separation of funding from provision functions, with the aim of improving efficiency. These changes have resulted in two prominent trends worldwide, vertical disintegration and horizontal integration (Robinson 1996, 1999). In response to these changes, hospital boards have evolved from the "caretaker" board to the "strategy-oriented", "corporate" board. Traditional hospital governance was mostly hospital focused and internally oriented. Since the late 1980s, it is increasingly healthcare focused and externally oriented, with the board governing complex interdependencies with market actors (Shortell, 1989)[1].

While providing private sector-like incentives is desirable, how to design appropriate institutions, given efficiency, quality and cost objectives, is far from clear. Consider the problem of decision rights allocations, the subject of this paper. In decentralizing decision rights, we face a trade-off between centralization and coordination in aligning the incentives of a hospital with those of the public health sector. "Optimal" decision rights allocations are those that align incentives within the hospital, as well as between the hospital and the the Ministry of Health (MOH) through the pairing of claimant and control rights. Appropriate risk sharing and adequacy of the power of incentives are essential , given intended outcomes are key to resolving the coordination problem when decision rights are decentralized.[2]

These conceptual conclusions have been corroborated by empirical challenges identified in work done on corporatization in recent years (see, e.g. Govindaraj and Chawla, 1996). However, contributions to date have focused mostly on the implementation and evaluation of hospital corporatization. Virtually absent from the literature are discussions of the institutional design of what is implemented – i.e., the infrastructure that underlies (and determines) capacity, then performance. This paper draws on conclusions from a class of models in organizational economics as an analytical lens to understand the problem of design in corporatization. Methodologically, the paper is an application of the decision rights approach to analyzing institutional design. I develop a new tool for this purpose - the Decision Rights Analysis Framework (Appendix B).

To understand some elements of good design I provide an in-depth analysis of an innovative and successful hospital in Lebanon, Hôpital Dahr El-Bachek (HDB), which acquired its own autonomy, quasi-legally, beginning in 1989, and became touted as the "best" hospital in the public sector. HDB's experiment with autonomy was watched and emulated over a period of seven years. In 1996, Law No. 544 was passed to corporatize all public hospitals in the country by granting them boards of directors and financial and managerial autonomy. However, partly because of its quasi-legal status, and partly for political reasons, very few design lessons from HDB informed the drafting of the 1996 legislation, and important opportunities were missed to draw lessons from the successes and shortcomings of the HDB experiment. Meanwhile, implementation difficulties experienced by hospitals corporatized since 1996 have revealed numerous design problems in the new legal structure (Implementation Decrees under Law No. 544) governing autonomous hospitals, and the MOH is planning to amend the decrees. The final section of this paper draws lessons from the HDB experience to inform the amendment of the hospital corporatization decrees[3].

I look at this "demand-side" story of institutional design to glean insights as to what a hospital would do if it were free to alter its own decision rights allocations in response to market forces – through "tatonnement", as a firm does. I find that in the "supply" of institutions - or the design of institutions on a system-wide level - risk transfer is important in satisfying arguably the two most important objectives of corporatization:

The establishment of hard budget constraints (to control sectoral costs, especially since public hospitals account for an average of 65 percent of MOH expenditures) – the "macro" side. For example, at HDB, the creation of the decision right to raise revenue through user fees was complemented with a number of decision rights that created a system of accountability. Combined, these decision rights served to keep spending patterns within HDB's means, while the international

[1] A range of hospital governance models has accompanied these changes over the past 30 years, summarized in Appendix A.

[2] A related paper (Eid 1999a) draws on lessons from the HDB case and agency theory to analyze system-wide problems in the legal structure of corporatization in the case of Lebanon.

[3] In a policy note submitted to the Minister of Heath in Lebanon in 1998, I analyzed the Law on Public Hospital Autonomy (#544) and its Implementation Decrees, and recommended the amendment of the decrees. This process is underway.

experience with corporatization points to problems of perennial budget deficits. On the other hand, HDB's informality precluded the exercising of decision rights created to design long-term financial policy, and therefore kept capital investment and development plans timid.

The provision of high-powered incentives (to improve overall performance of a hospital, including better quality service at low cost for the patient) - the "micro" side. Among the most interesting of HDB's decision rights allocations was the pairing of claimant and control rights resulting in high powered incentives for employees, most notably the director. In the private sector, this amounts to the manager owning part of the firm, but is uncommon in the public sector. The most successful examples of corporatization have experimented with compensation schemes and performance benchmarks for the hospital manager that seek to approximate this result, as in the case of Catalunia, Spain (Salas, 1996).

The following section, provides a discussion of key conclusions from a class of theories in organizational economics used in the study to inform the problem of institutional design in corporatization. Section 3 discusses the natural experiment which was analyzed and explains the methodology developed to analyze it, as well as the data drawn upon. In Section 4 an overview is provided of the pre-corporatization (centralized) decision rights allocations HDB (and all public hospitals) functioned under.. In section 5, the demand-driven groups of decision rights adopted by HDB is described as well as their evolution and some key examples of decision rights complementarities are analyzed. This section also discusses some cases of decision rights pairings that were either inappropriate, or did not succeed and explains why this was so. Section 6 contrasts some of these pairings with the decision rights allocations established through legislation and Section 7 draws policy implications for the design of corporatization ..

2. Analytical Approach

The decision rights approach derives from a large body of literature on agency theory and transaction costs that began to explore alternatives to the neoclassical, "technological" view of the firm as a production function (see, e.g., Chandler, 1990). Among the important issues neoclassical economics is silent on, are incentive problems within the firm, the hierarchical, decision-making and authority structures that govern organizations, as well as their boundaries. Over the past 20 years, agency theory has made important contributions to explaining incentive problems within organizations (Hart and Holmström, 1987; Holmström, 1994; Laffont and Tirole, 1993). The transaction cost literature starting with Coase's famous 1937 paper has been developed by Williamson and others and has contributed to the important distinction between a theoretical contract and a real, incomplete contract. Building on the idea of contractual incompleteness, the transaction costs approach resulted in explorations of the costs and consequences of renegotiation, asset specificities and the hold-up problem (see e.g. Dewatripont 1989; Klein *et al*., 1978; Fudenberg and Tirole, 1991; Meyerson and Satterthwaite, 1983 and Joskow, 1985).

The decision rights approach contributes an explanation of organizational change, namely what happens when firms merge or de-integrate. Because of its focus on the micro-dimensions of organizational change, this approach has the potential of shedding new light on old questions about the public sector, such as why and when decentralization is desirable, and exactly what happens to incentives and performance when a public agency is decentralized. Crémer, Estache and Seabright (1995), Tommassi and Saiegh (1999), and Schwager (1999) are among the new explorers of this vein of the decision rights literature to understanding public sector organization. Eid (1996) was written with the same objective.

The decision rights approach assumes that all contractual arrangements are by definition incomplete because it is impossible to account, *ex ante*, for every possible contingency. Given contractual incompleteness, "residual control right" allocations are critical[4]. A basic premise of the decision rights approach is that organizations work well when they allocate the authority to make decisions to the agents best informed to make them. Incentives also have to be correctly aligned, between principals and agents, otherwise those with the information can make decisions that are in their interest, but not necessarily in the interest of the organizations to which they belong. Key to aligning incentives is the pairing of control rights with claimant rights - the entitlement to receive any net income that a given asset (or firm) produces. Typically, the asset owner is entitled to the income that remains from revenues after all expenses, debts and other contractual obligations have been paid off. This net income is the "residual return" (Milgrom and Roberts 1992). If the residual claimant also has residual control, then he/she will be led to make efficient decisions just by maximizing his/her own returns. When decision rights are paired in this way, decision rights allocations are said to be "optimal" for maintaining and increasing the value of

[4] 'Residual control rights' over an asset are defined by Hart (1995) as "the right to decide all usages of the asset in any way not inconsistent with a prior contract, custom, or law ... possession of residual control rights is taken virtually to be the definition of ownership ... in contrast to the more standard definition of ownership, whereby an owner possesses the residual income from an asset rather than its residual control rights" (pp.30). Residual control rights are also referred to as 'decision rights' by Holmström (1995), Milgrom and Roberts (1992), and Kreps (1992). The latter, shorter term is used more frequently in this paper.

the asset or organization in question[5]. Changes in organizational boundaries, say from centralization to decentralization, are accompanied by changes in formal and informal rules that allocate control rights. These allocations, in turn, distribute power within organizations, and affect the incentives agents have to perform and innovate.

These findings are corroborated by a class of models in organizational and information economics that have explored the implications of a range of agency problems, power and authority in firms, and organizational boundaries. Common to these models is the conclusion that autonomy (or firm de-integration) entails risk and high-powered incentives, sometimes in the form of claimant status. In the public sector, on the other hand, we tend to see centralization (integration), little or no risk transfer, and low powered incentives with no claimant status. This paper shows how one public sector agency developed its own autonomous structure by assuming high levels of risk and creating high-powered incentives, based partly on the pairing of control and claimant rights.

Although the decision rights approach has contributed important analytical lenses for understanding organizations, few empirical tools have been developed to draw on the insights the approach offers[6]. There have been even fewer applications of this approach to the public sector despite the importance of the issue (Dixit, 1996; Hart, 1995; Tirole, 1994; Williamson, 1997). The study of hybrid organizational forms like corporatization offers an opportunity to focus on some new dimensions of ownership in the public sector. Among these is the issue of incentive alignment through institutional design, regardless of where ownership lies.

This paper develops a framework for applying the decision rights approach to show how HDB selectively adopted the decision rights necessary for it to improve its performance over time (as demonstrated through its productivity and activity figures)[7]. The study compares decision rights allocations before and after HDB was corporatized. To get at the full picture, this analysis will also show how some decision rights would have been desirable, but were not adopted because it would not have been "optimal" for HDB to adopt them at the time, because of systemic, process, and capacity constraints. Examples of systemic constraints were unpredictable public sector financing, and contradictory MOH policies. Such factors contributed to fluctuations in HDB's liquidity. The most important process constraint was the fact

[5] For a discussion of the relevance of this approach to health, see Harding and Preker (1999).

[6] This is partly due to the fact that social scientists in the past two decades have been more concerned with model "testing" than with the use of models as analytical lenses.

[7] Decision Rights Analysis Interview Framework, Appendix B.

the director had appointed the *Association Libanaise de Soutien Médico-Hospitalier* (ALSM), while the process tends to be the reverse in normal boards. As a result, the ALSM had limited power over the director, and many decision rights that it sought to adopt and implement were diluted, and the ALSM allowed them to be reallocated or abandoned. Capacity constraints, such as weak middle management capacity, also precluded HDB from adopting the full set of decision rights originally envisioned. The secret to HDB's sustainability was in reaching an equilibrium that maximized HDB's objective function, subject to these constraints. In turn, lack of careful consideration of this and other such constraints, have resulted in problems with the implementation of the centrally designed, national public hospital structure under Law No. 544, as will be discussed in Section 6.

3. Why HDB is An Interesting Phenomenon

After 15 years of war, the Lebanese ministry of health had severely limited financial and technical capacities to operate its public hospitals. During the last two years of this war, and over a period of seven years, HDB began to transform itself from a 15-bed hospital providing minor surgery and basic medical treatment, to a 110-bed hospital that offers a range of services, from physiotherapy to plastic surgery. HDB became touted as the "best" hospital in the public sector. Although no detailed comparative studies have been carried out, patient demand, as well as basic quality and activity figures confirm that HDB deserves the reputation it has come to enjoy. The success of HDB is due to three important factors:

The commitment of those who headed, lead, and supported it over time;

the contributions of its patients who were mostly of the lowest socio-economic background in the country and;

donations of NGOs and international organizations, solicited by HDB patrons[8].

Prior to 1996, patients were not obliged to pay for treatment received at public hospitals in Lebanon[9], nor were hospitals allowed to place funds in commercial bank accounts. Public hospital funds, along with all MOH budgetary allocations, were held by the treasury. Under the leadership of an innovative director, and a supportive minister of health, HDB set up a nonprofit association, the *Association Libanaise de Soutien Médico-Hospitalier* (ALSM), whose seven members came to function as a

[8] Eid (1999c) is a newspaper article that summarizes the history of HDB's trajectory toward success and presents it as an example of "good" performance in the public sector.

[9] Although patient "contributions" were recommended, according to the text of Decree No. 325 (1971) which amended the original decree defining the Organization of the Ministry of Health (No. 8377, 1961), the practice was for public hospitals to provide what services they were capable of providing, free of charge.

board of directors for the hospital. Among the roles it took on, the ALSM became a repository for funds collected through cost recovery and funneled back into the hospital to supplement operating and capital expenditures. The revenue-raising capacity that HDB created for itself was at the heart of the experiment because it allowed the hospital to make decisions rapidly and independently of the central administration over a range of areas of hospital finance and management[10]. Fees charged to patients ("contributions") were placed in the ALSM's bank account, which then made "contributions" to supplement HDB's operating and capital expenditures.

When the topics of politics and public service delivery are discussed together, it is usually to illustrate the corrupt influence politicians have on the public sector[11]. The case of HDB is an interesting counter-factual example, where political influence was crucial to the improvement and continuity of service delivery and, instead of corrupting the experiment, served to protect it. Perhaps the most important political champion of the experiment was the minister of health who at the time- - knowing all too well the inadequacies of his sector - turned a blind eye to the informal aspects of the budding experiment, allowed the hospital to thrive and flaunted its achievements. The high profile acquired by HDB helped to immunize it from corruption[12].

Interestingly, what little political pressure HDB was subject to came in the form of requests to the HDB director to sign off on forms allowing patient admissions to private hospitals, under the MOH subsidy system[13]. The director would sometimes have to sign off on these requests despite the fact that the treatment being sought could be provided by HDB[14]. This preference for private sector treatment was based on the conviction that the public sector was not "good enough", and in most cases it was not. Political pressures created a perverse public sector competition that indirectly hurt HDB and resulted in a decline in its admissions rates beginning in 1995, as activity figures will show. As far as direct intervention in HDB activities, non of the local political leaders thought it worth their while, thereby sparing the HDB experiment as it grew.

3.1 Profile and Setting

HDB has a long and interesting history (Sabbagh, 1987). Founded in 1909 as a tuberculosis (T.B) sanatorium on a beautiful hill overlooking the coast of Beirut, it was among the first of its kind in the Middle East. HDB came to exist thanks to the efforts of a foundation created and lead by a group of Lebanese and American philanthropists at a time when American missionary activity had initiated many important projects, including the American University of Beirut[15]. Pillaged by Ottoman troops during World War I, the sanatorium resumed its activities and expanded their scope thanks to the contributions of its patients, many of whom came from affluent families in the Middle East and the Gulf, and the commitment of its patrons, including a non-profit foundation started in Boston in the late 1920s by Lebanese and Syrian immigrants. By the 1960s, T.B. recovery rates had risen to 95 percent (from 25 percent in the 1920s) and a declining number of affluent patients came to the sanatorium as the average recovery period dropped from 20 months in the 1940s to four months in the 1960s, and also T.B. was no longer feared and home care became possible. By 1971 the sanatorium was no longer able to cover its costs and was donated to the government, which transformed it into a public hospital.

The war in Lebanon started in 1974 and until it ended in 1990, it led to a progressive deterioration in human and capital resources in the public sector. Several local and international humanitarian agencies took an interest in HDB during this time, most notably the French *Médecins du Monde* which made several capital donations to reconstruct damaged buildings. In terms of the trajectory of HDB since the late 1980s *Médecins du Monde*'s most important contribution was the smallest in financial value and the largest in sustainability. It was a grant of US$127,000 that made possible the creation of a rudimentary one-time bonus system for staff to encourage them to brave the bullets and come to work. The idea of creating the ALSM to continue and perfect the system came about at this time. During the tail end of the war (1989-90), as the *Médecins du Monde* project was being implemented, the region surrounding HDB

[10] The inclination to innovate, when agents are given (or take) local control is a universal phenomenon that has been shown in theory and in practice. In a separate paper (Eid, 1996) I show how an innovative municipal finance program in Chile can be explained using the same conceptual approach applied in this paper.

[11] A tradition of literature on rent-seeking in the developing world is replete with such examples (see, e.g., Krueger, 1974).

[12] See, e.g., Geddes (1994) on the importance of insulating public sector reform initiatives from politics. During his tenure from 1991 till 1996, the minister of health visited the hospital at least 11 times, attended the ALSM's social and fundraising events, held press conferences from HDB and invited one Swedish and two French ministers of health to showcase visits of HDB while they were in Lebanon (Intreview with Marwan Hamadé, former minister of health (13.VIII.98) and ALSM Minutes of Meetings).

[13] This was an emergency measure passed during the war. Reform efforts are underway today because 90 percent of MOH expenditures go toward private sector cost reimbursement. The consequences have ranged from complaints, to over-billing on the part of hospitals, to pressure on the MOH from private sector pressure groups, to arrears on the part of the MOH to the tune of USD400,000,000.

[14] Interview with the former director of HDB.

[15] *Dahr el-Bachek* means "Peak of the Sparrow-Hawk". Home to this particular specie of fast birds, this peak is one of many in mountainous Lebanon.

was suffering the worst of Lebanon's war experiences, and HDB doctors often slept at the hospital in order to keep up with the treatment of casualties admitted.

HDB is located in an area that experienced rapid population growth and industrialization during the war years (1974-90). This northern suburb of Beirut is densely inhabited, and its small industries mostly employ manual workers such as carpenters, mechanics, tailors and leather workers. These tend to be uninsured and often undeclared employees of the informal sector. In addition, a large proportion of HDB patients constitute Sri Lankan, Egyptian, and Ethiopian servants and laborers working in Lebanon. Many of these people tend to be uninsured. Finally, in 1994, 15.15 percent of HDB's patients lived in remote areas like the Kesrouan (three percent), Byblos (3.3 percent) and the North Metn (3.1 percent) and in the South (3.09 percent) and in Baalbek and the Bekaa (2.64 percent), regions that had their own public hospitals (Jabbour, 1994). Such patients most certainly came to HDB because they could not find better treatment at a lower cost elsewhere. HDB's war years experiences, combined with this clear demand for its services went far in motivating the ALSM founders to improve the hospital.

3.2 Research Methodology

This research is based on structured and open-ended interviews, analysis of documents, minutes of meetings and legislation, and financial analysis based on annual reports and financial statements from HDB and other hospitals. Between March and September of 1998, I benefited from permission to take part in weekly meetings of the MOH Task Force on Public Hospitals as a participant observer[16]. My presence in these meetings was crucial to understanding the sectoral and macro dimensions of public hospital reform in Lebanon, and the day-to-day obstacles encountered in implementation. During the summer of 1999, I benefited from permission to accompany the MOH Ratings Commission to inspect public and private hospitals and assess their standards, HDB included.

During the summer of 1997, a first round of introductory, then open-ended interviews was carried out with five of the seven founding members of the ALSM and some HDB and MOH employees as I was exploring the possibility of doing this work[17]. I conducted another series of interviews with six members of the ALSM during the summer of 1998 and the summer of 1999, this time using the Decision Rights Analysis Interview Framework I had developed during the spring of 1998. These interviews lasted three hours on average, and began with an explanation of the approach and with definitions of decision rights and decision rights allocations to ensure that interviewees had a uniform understanding of both the approach and the questions. Two criteria were used to determine who held a decision right:

If the director held the decision right over a given area, he could make changes, either without informing the ALSM at all, or by informing them only after changes had been made;

If the ALSM held the decision right, they would make decisions during ALSM meetings, and the director could not proceed in implementing anything related to the decision without having received the result of the discussion by the ALSM.

Typically, the director was party to all discussions as *ex officio* member of the ALSM, so he can be considered to have been a co-holder of most rights, some more strongly than others depending on how much influence he had over final decisions made, and whether he abided by decisions taken. He was the sole-holder of most decision rights internal to the management of the hospital.

To track the evolution of decision rights allocations over time, each of the boxes in the Decision Rights Analysis Interview Framework was divided into three rows representing the periods 1991-1992, 1993-1995, and 1996-1997, respectively. To determine the degree of influence each of the actors in the columns (ALSM (Support Committe), HDB Director, MOH, Other) had over the decision right (and ultimately who held the decision right), one, two, or three pluses were placed in the row. For example, if the interviewee believed that the director co-held the decision right with the ALSM over a certain matter with equal influence, two pluses were entered on each side, for the period at hand. If the interviewee felt that the director was a fairly weak co-holder, and the ALSM had more influence over a given issue (i.e., the ALSM could proceed with the decision even if the director disagreed), one plus was entered in the box for the director, and two or three pluses in the box for the ALSM, or vice versa.

Interestingly, for 95 percent of decisions rights analyzed, all interviewees were in agreement over who the principal holders were, and how the right evolved over the seven-year period. Where there were contradictions in answers, two additional follow-up interviews were conducted. One with other members of the ALSM who disagreed on either the decision rights allocation or its evolution, and one with an HDB staff member who interacted with the ALSM and the Director on the issue at hand. For

[16] See Pomper (1991) for a review of the benefits and constraints of participant observation as a qualitative research method.

[17] The founding members of the ALSM were Edouard Abboud *(ex officio* member and director of HDB at the time, an ophthalmologist), Ramez Awad (an orthopedic surgeon and dean of the Lebanese University Medical School at the time), Bechara Hatem (current president, a lawyer), Michel Matta (a pediatrician), Tony Manasseh (first president, a business man), Nicolas Sassine (a pharmacist), Georges Sfeir (an engineer), and Joe Saleh (a bank manager).

example, if the contradiction arose with respect to an area of finance, the HDB accountant was interviewed to explain the difference – an approach sometimes referred to as "triangulation" (Yin, 1994). I sought to understand whether the contradiction was due to a data-gathering failure or to the idiosyncrasies of personalities and differential perceptions and experiences on the part of interviewees. In all such cases, I was able to refine the manner in which the data were collected either by re-posing the question or by posing it differently, or to attribute the contradiction to personality and temperament. The total number of interviews carried out with ALSM members was 24, averaging three hours in duration.

The second most important source of data were the minutes from seven years of meetings that took place twice per month during the first four years, and with decreasing frequency after that. A total of 143 documents averaging three typed pages in length (excluding annexes), these minutes were methodically and professionally kept, and constitute a rare and valuable window onto the evolution of public sector institutions[18]. Similarly methodically kept were a treasurer's ledger, purchase orders, and files of receipts, all of which were used to produce audits and annual reports by a professional accounting firm. The ALSM also kept detailed personnel rosters and employee absence information. Also used in this paper were various reports written by HDB and MOH/World Bank staff on HDB and on other public hospitals.

In addition, a total of 25 interviews were conducted with HDB middle managers, the former and current director, and doctors and nurses currently or previously connected with HDB. 20 interviews were carried out with MOH central administration staff from the procurement, public hospitals, medical care, accounting, and directorate general divisions. Finally, the two former and current ministers of health and a total of four of their advisors were interviewed.

In Lebanon, there are 17 public hospitals, of which six are being corporatized. Because implementation of the reform only began in 1999, and because of lack of data in public hospitals in general, experimental design using HDB as a "control" is not feasible. Instead, the examination of HDB's trajectory is designed as a "reflexive comparison" that compares HDB to itself before and after its self-induced corporatization program, using time-series quantitative and qualitative data from 1988 until 1997. Given that HDB was the leading edge of change in the Lebanese public hospital sector - by definition a non-representative case - the objective behind this research is neither to suggest that the case be replicated nor to generalize from the case to the population. Instead, this research seeks to discern key elements that can inform the theory, and to generalize from case to concept (Yin, 1994), in particular the institutional design as defined by Law No. 544 and its Implementation Decrees[19].

4. Mapping of Pre-Corporatization Decision Rights Allocations for all Public Hospitals

For the four main areas of hospital management and finance (finance, human resource management, procurement, Ssrvice delivery), a set of pre-corporatization (centralized) decision rights allocations governed all public hospitals in the country until 1996. Each of the sections below will map out the principal set of decision rights, discuss who their holders and co-holders were, and what the implications of the institutional design were on the operation of public hospitals in Lebanon. This analysis will show that most decision rights were held by administrative units above the level of public hospitals, and that the latter had little leeway to adapt to, or respond to changes in local demand for public health delivery.

4.1 Finance

The principal holder of decision rights over all matters related to finance in public hospitals was the ministry of finance, in particular the treasury department and the budget office. These decision rights were allocated through two principal institutions: The public accounting law and the annually promulgated budget law[20].

The public accounting law defines the procedures for the formulation of the government budget, and spells out its main components. The budget law supplements it, specifying the details of the budget by sector and by item. These laws govern all government agencies, including public hospitals. They determine:

Expenditures, ranging from allocation to disbursement;

revenues, including taxation and other extractive instruments and collection of owed and outstanding public fiscal obligations.

As far as public hospitals are concerned, the co-holders of decision rights over finance within the MOH were the department of medical care and the procurement

[18] Each set of these minutes begins with a list of members present, then lists an agenda, then itemized discussions of the agenda, and concludes with a financial report from the treasurer.

[19] This paper adopts North's (1990) distinction between "institutions" and "organizations". Institutions are the formal and informal rules that shape interaction. They range from constitutions, to laws, to common practice to corporate culture (Kreps, 1993). Organizations are groups of individuals bound by some common purpose to achieve a given set of objectives. They include political, economic, social and educational bodies. In this paper, a hospital is an organization. The law and decrees governing the operation of the hospital are a set of institutions.

[20] The Public Accounting Law is defined by Decree No.14969 (1963). Section No. 2 of this decree specifies the procedures for the preparation of the annual budget law.

department. According to the letter of the law, the department of medical care received proposed budgets from public hospitals, aligned and incorporated them with its own budget, and submitted them to the procurement department. The procurement department then made further adjustments to proposed budgets based on allocations in previous years, and forwarded them on to the accounting department for final incorporation into the sectoral budget proposal. The law does not provide for instances where budgets proposed by public hospitals are not found acceptable by the department of medical care because, in practice, there was no negotiation between these two parties over the budget under this system. The fact that no formal mechanism was defined in the law for agreement on a final budget between the department and the hospital left the final decision up to the discretion of the department of medical care and to the procurement department – equal co-holders of this decision right. In practice, some hospitals (along with other MOH units) had the capacity and discipline to submit budget proposals and others not. As a result, the system did not ensure careful consideration of real changes in demand. Figure 1. depicts the budget preparation process of public hospitals under the old system.

In practice, information obtained through interviews indicates that the system described here was even more centralized in practice than it was *de jure* for the following reasons. More often than not, partly because of emergency and crisis-management exigencies during the war and a gradual loss of public sector capacity for planning, sectoral expenditure ceilings were pre-set by the ministry of finance without careful consideration of need in each sector. In the case of the MOH, for instance, once the minister's office received the budget figures for the sector, an *ex post* allocation of expenditures was made to the various budgetary units in the sector, hospitals included.

The process was not only irregular and granted few decision rights to public hospitals, it also tended to be even more centralized, and granted a constrained set of decision rights over finance to the MOH itself. It is better schematized as shown in Figure 2

4.2 Human Resource Management

The Decree on Personnel[21] defines eligibility, grades and pay-scales for all public sector employees. This decree defines a basic set of public service responsibilities, guidelines for the disbursement of remuneration, bonuses, family and expense allowances, promotion criteria, disciplinary measures, completion and termination of employment severance pay, and retirement for both career appointments and fixed-term employment (i.e. of contractual workers, seasonal workers and casual wage workers). The decree allocates all decision rights over such matters to the Civil Service Board, a central body that hires, assigns, promotes, disciplines and terminates civil servants. Co-holders of these decision rights, with varying degrees of influence are sectoral ministers, who formally recommend appointments. Ministers' decisions are, in principal, based upon recommendations of the their directors general (or "DG" - the administrative heads of the sectors) and/or division directors (middle managers). In practice, the DGs are fairly weak co-holders of this decision right because the amount of influence they wield is partly determined by their relationship with the minister, and the politico-sectarian determinants of the DG's appointment. The MOH Decree also delegates some decision rights over personnel to the department of medical care, but none to hospitals. Hospitals, like all other budgetary units, could make requests and recommendations for personnel matters, but they could not make decisions in this area. All hospital recommendations and requests could be superceded by the hierarchy beginning with the department of medical care and ending with the minister of health, the civil service board and the council of ministers.

Given this centralization of decision rights over personnel, sectoral legislation is limited to determining the number and type of employees to be hired in various units, including hospitals under the centralized system. Although relatively minor in the overall scheme of things, this role of the MOH in personnel matters added to the rigidity of the system. For example, the decree[22] that set the organizational structure and functions of the MOH, determined the exact number of positions and specializations for each public hospital in the country, beginning with the hospital director down to hospital drivers and housekeeping staff. All personnel matters in the MOH are handled by a personnel section that is part of the office of the minister (*diwan*), however, this section's decision rights have more to do with the processing of information and the documentation of recommendations than with policy formulation and decision-making.

4.3 Procurement

The MOH Decree also provides for a procurement division, whose functions epitomized the centralization of the ministry under the pre-corporatized system. All decision rights over the procurement of non-labor inputs used by public hospitals in producing health services were held by this department. These inputs ranged from high-tech laboratory and surgical equipment to the provision of maintenance services, to the procurement of stationary and pencils. In addition, this department also held

[21] Decree No. 112 (1959), defining the organization of personnel in the public sector.

[22] Decree No. 8377 (1961) defining the organization of ministry of health (also referred to as the MOH Decree in this paper).

decision rights over some extremely important areas, such as the preparation of budget proposals made by MOH administrative units, including public hospitals, and the management of two important MOH central stocks and of their deliveries. These are (a) the capital inputs depot, including medical equipment and supplies, and; (b) the medicine depot, which supplies all drugs for all uses in public health provision in Lebanon. All inputs were centrally procured and stored in these units before they were distributed to relevant units in the public health sector.

4.4 Service Delivery

Similarly, decision rights over the organizational structure and functions of public hospitals were determined by the MOH Decree. This decree defined the internal organization, service mix and number of beds for each public hospital in the country. How well the actual state of affairs approximated what was laid out in the law was variable. For example, the number of beds hospitals had, varies significantly from what was specified in the decree, especially in terms of numbers of operational beds[23].

Table 1 summarizes the centralized decision rights allocation that prevailed in the MOH at the time when HDB launched it corporatization experiment. Under each of the four areas of hospital finance and management discussed above, the table details the principal set of relevant decision rights, and identifies their holders. The column "Not Held" refers to areas where the decision right did not exist altogether.

5. Mapping of HDB Decision Rights Reallocations, Post-Corporatization

For each of the following areas, this section will describe: (i) the decision rights allocations adopted by HDB and; (ii) the manner in which decision rights were distributed to create complementarities in certain areas[24]. This part of the analysis will take into consideration decision rights changes considered, but not adopted and will evaluate why this occurred.

A procedural simplification characteristic of HDB's trajectory was one of the first breaks given by the minister of health to the hospital. This simplification came in the form of an official exemption from some centralized administrative procedures. Through special permission, the minister of health allowed HDB to skip two levels of regional bureaucracy (the district doctor and the provincial representative of the MOH) and to conduct its business directly with the central administration of the MOH.[25] This step paved the way for the close relationship HDB developed with the MOH under the governance of the ALSM.

Inasmuch as it is possible to generalize over a period of seven years, the first two years of HDB's experiment with autonomy were anomalous. Because of their novelty, these years were surrounded by much enthusiasm and motivation from all those involved in HDB. During this period of "super-normal" zeal, the ALSM used to meet every other Monday, and follow up in between, through meetings with public sector officials and donor agencies, and smaller (subcommittee) meetings that would sometimes take place on Sundays. Also during this period, the wives of ALSM members were invited to form a ladies auxiliary. They would wear their specially ordered aprons and alternate carefully scheduled shifts to ensure all-day presence in running the hospital cafeteria they had re-opened. They would also carry out hygiene spot checks in hospital wards. During this period, a large number of decision rights were created, some of which were not fully adopted, and others were reassigned and/or diluted over time because their initial allocation was not tenable. HDB's equilibrium for decision rights allocation was reached approximately three years after the ALSM began its work, for two reasons:

The fact that the HDB experience developed through what might best be described as "tatonnement": there was no model or pre-determined design for autonomy, nor were the limits and constraints predictable or constant;

the only legitimacy the experiment enjoyed emanated from the undeniable improved productivity of the hospital and its concomitant reputational effects, from the credibility of the individuals involved, and the good relations they forged with the ministry of health.

Key to the manner in which HDB arrived at its decision rights equilibrium, was the distribution of its created rights between the ALSM and the director. During its first two years, the ALSM adopted a very ambitious and aggressive strategy of designing various committees and quality-control functions that sought to create a quasi-managerial/supervisory role for the ALSM. These steps were taken in reaction to severe lacunae in managerial and productive capacity at HDB at the time, especially

[23] Information obtained from the Directorate of Medical Care, MOH, July 1999.

[24] To illustrate the notion of complementarity, take two types of assets, a1 and a2 (located in firm 1 and firm 2 respectively). These assets are strictly complementary either if access to a1 alone has no effect on the manager of firms1's marginal return from investment (i.e., if he needs a2 as well), or if access to a2 alone has no effect on the manager of firm 2's marginal return from investment (i.e., he needs a1 as well). Assets a1 and a2 are independent if access to a2 will not increase the manager of firm 1's marginal return from investment if he already has access to a1, and if access to a1 will not increase the manager of firm2's marginal return from investment if he already has access to a2. This paper adopts the same logic for decision rights complementarities.

[25] Interview with former HDB Director, August 1999.

in middle management capacity. However, like a graft that does not "take", many decision rights were slowly reallocated or abandoned[26].

The formal justification/explanation of shifts in decision rights allocations during this period centers around a personality clash between the hospital director and the president of the ALSM[27]. However, careful analysis of data and minutes of meetings dating back to the years 1990-1993, combined with information obtained through structured interviews using the Decision Rights Analysis Framework, bring to bear a more complex picture. The analysis of decision rights reallocations, in particular, reveals that some of the roles the ALSM tried to take on (such as supervisory and management roles) were not tenable, despite the fact that they were necessary. These rights were not tenable because HDB did not have the middle management necessary to implement them, as will be explained in more detail below. Nor did some of the decision rights the ALSM tried to acquire square with the conventional functions of even the most aggressive of hospital boards. Interestingly, by 1993, the equilibrium reached at HDB was very much along the lines of the "corporate" board of a competitive hospital (summarized in Appendix A). The director was in charge of day-to-day decisions. The ALSM set the envelope for HR expenditures, discussed and cleared senior staff HR matters, such as new appointments, bonuses and contract renewals and terminations.

On the other hand, the analysis of decision rights allocations also makes clear that some important functions were not adopted because the informality of the experience precluded their implementation. For example, while most boards can wield authority over the director partly because he/she is selected and employed by them, at HDB the situation was the reverse. The director had personally invited five of the seven members of the ALSM to serve on the board. Instead of being determined *ex ante*, the distribution of decision rights between the ALSM and director was the result of negotiations that waned, but continued almost until the very end. Typically, in struggles between the director and the ALSM over decision rights allocations and the exercise of decision rights throughout the seven-year period, the informational advantage of the director dominated (interviews with ALSM members). Also, this tenure was a long one by most measures, and it was fairly intense at the beginning and near the end - periods of disequilibrium in decision rights allocations. As a result most members of the ALSM had progressively less energy and time to allocate to HDB, which led to their gradual ceding of many decision rights to the HDB manager, and ultimately to their departure once there was a cabinet reshuffle and a new minister of health was appointed. By this time, the ALSM was functioning more like a caretaker/benevolent board (see Appendix A). Very few important policies were initiated or implemented, despite the fact that they would have been desirable[28]. The departure of the minister of health at the end of 1996 coincided with the HDB director reaching retirement age and the appointment of a new director by the new minister. These changes caused decision rights to be reallocated anew, a costly and tiring process, which accelerated the departure of the ALSM from HDB in December 1997, after an attempted period of accommodation with the new director (interviews with ALSM members).

5.1 Decision Rights over Finance

Once the ALSM was formed, the manager and the ALSM members rapidly created and adopted a set of decision rights that were crucial in allowing the hospital to supplement the revenue coming from the MOH. These rights, created in the area of finance, gave HDB the option of recovering costs from its patients and the flexibility in allocating these funds toward capital and operating expenditures in rapid and flexible responses to demand on the hospital. The impact on HDB's admissions rates was immediate. The average number of admissions per month jumped from 55 to 259 between 1988 and 1991. Part of this increase was due to the escalation of hostilities during the last year of the war (1990). However, the secular increase in hospital admissions after the end of the war, in October 1990, was evidence of an increase in demand due to quality improvements and to the increase in HDB's (staff and capital) capacity to receive patients. The increase in revenue also allowed an expansion of HDB's service mix (and hence admissions rates) as will be shown in the section on service delivery.

Table 3 summarizes HDB's decision rights allocation in the area of finance. "Rights created" are ones that neither HDB, nor the central administration possessed before the HDB experiment was launched. In all four areas of hospital management and finance examined, rights that were "created" were exercised alongside existent MOH rights, i.e., they supplemented them. None of the newly created rights were meant to overrule old rights – one of the secrets to the ALSM's success. "Rights appropriated"

[26] Overkill is not an uncommon phenomenon when private sector actors take it upon themselves to improve the public sector. Out of good intention and enthusiasm, such people often seek to design a Ferrari when a Fiat would have been enough of a first replacement to the Broken Bicycle (see, e.g., the experience with the Presupuesto por Resultado in Mendoza, Argentina, forthcoming in Fuhr (2000).

[27] All ALSM members, including those who were party to the conflict gave consistent reports of this personality clash during interviews.

[28] There are a total of 28 references to organizational and restructuring initiatives recorded in the minutes of meetings, of which eight are discussions of major hospital restructuring plans. These discussions were more frequent in the latter part of the experience.

are ones that HDB *de facto* transferred down to its own level, despite their being *de jure* held by central administrations of the public sector, such as the MOH, the MOF and the Civil Service Board, as discussed in Section 4.

The pillar of HDB's increased expenditure capacity was the creation of the cost recovery decision right. The idea was to keep HDB rates at around 1/3 of private sector rates. Fees were set in 1990, and adjusted periodically, depending on inflation and on the increase in HDB's expenditure requirements. Among the interesting comparisons Table 3 reveals are costs of inpatient care at HDB, when compared with private sector hospitals of the same quality range. For example, while HDB charged US$22.96 per day in the surgery ward (for the first five days) and the private sector charged US$12.50 per day, the latter figure only accounted for room and board while the HDB figure included the full treatment. To illustrate, in 1990, an appendectomy involving a five-day stay cost an average of US$400.00 in the private sector when doctor's fees and hospital hotel and pharmacy charges were factored in. At HDB, the cost of an appendectomy was US$56.88 (US$11.38*5) in 1990, 14 percent of the fee charged in a private sector hospital of equivalent quality. By 1997, cost of care at HDB had gradually increased to an average of 50 percent of private sector care.

By 1994, HDB's fee system had become more sophisticated and closer to the system in the private sector. For example, the price of an appendectomy, with a five-day stay, can be calculated from Table 3 in the following way. An appendectomy is valued at 50 Ks. While the private sector charged US$3.30 per third-class K in 1994, HDB charged US$1.21, amounting to US$60.50 for a 50K operation. Added to this charge were hospitalization and hotel fees in the medical ward, amounting to US$15.80 per day. Taking five days as an average length of stay, the total cost of an appendectomy at HDB in 1994 was US$139.50 (or [1.21*50] + [15.80*5]). For comparable third-class private sector treatment, the patient would have paid US$570.00 in 1994[29].

Explaining HDB's decision rights complementarities

This section will explain how HDB adopted decision rights that were complementary in some areas and explain why it failed to do so in other areas. It will contrast HDB's decision rights complementarities with those of other informally corporatized hospitals and with the new legal structure under Law No. 544. The data in this, and similar sections below was collected using the Decision Rights Analysis Framework (Appendix A).

Some information on other informal experiences is in order first. HDB was not unique in attempting to become autonomous before the law was passed. Other public hospitals faced the same needs, and tried to acquire some autonomy under the auspices of "support committees". Support committees (SCs) were even less formal boards than the ALSM in the sense that they were not legally incorporated. They were of three types:

Some SCs were formed by local politicians who saw control of local health provision as an opportunity to gather political support. Not being subject to the same legal and reputational liabilities of the ALSM, these SCs were not accountable, neither to the MOH nor to the community. They did not face the pressures of having to create transparent and accountable systems, and interview data suggests that some of them were associated with graft.

Other SCs were dysfunctional from the outset because they were much closer to the "alternative career" model of governance (Appendix A), and the members of the ALSM did not have much to add to the hospitals they oversaw, least of all in areas of financial policy and strategy.

A third group of SCs were "nominal" only, created by hospital directors to facilitate the collection of fees for services and functioned mostly as a bank account. Members were the minimum number required by law to form an association (three people) and they met rarely, or never. Needless to say, hospital governance under these SCs entailed no attempts to establish systems and procedures. Decision rights creation and allocation was random and arbitrary.

In matters related to finance, by far the most important decision right HDB created was the right to collect fees for health services delivered – included in Table 2 under "solicitation of outside funds"[30]. The remaining rights complemented the right to raise revenue by establishing policies and controls on the use of funds. Combined, these rights (along with others discussed below) constituted a system of accountability that was the basis of the gradual improvement of HDB. Revenue was combined with controls and procedures to produce improvements that other informal experiences like HDB in Lebanon did not establish. None of the other hospitals produced audited reports, nor kept records of minutes, policies and programs that sought to systematize

[29] A final, important source of capital HDB received was in kind, and was made possible through the creation of the decision right to solicit outside contributions. Most notable among these is an ophthalmology ward that is the most advanced in the public sector, donated by Lions International. The cost of this ward was USD400,000.00. Another such contribution was the hospital library, financed by USAID at a cost of USD27,000.00.

[30] Also included in this category are cash grants, gifts, and in-kind contributions secured by ALSM members and the HDB director through their personal and professional contacts – very much along the lines of the traditional "community notable" type board (Appendix A).

exemption policies and fee setting, for example. In many cases, the lack of systems resulted in arbitrariness, politicization and/or apathy.

Interestingly, the ALSM's concern with accountability derived partly from its quasi-legal status. The ALSM was a legally incorporated non-profit, however its relationship with the hospital was quasi-legal, especially in requiring patients to contribute to the cost of care. Furthermore, the whole experience was perceived by many to be illegal, because of suspicions of under-the-table payments, and because of instances of graft at other hospitals. Combined, these factors contributed to ALSM members being very careful about the consequences of their decisions, and their desire to innovate was tempered by the risk they incurred in innovating. This risk was just as much reputational as it was financial, and it functioned as a constraint on HDB activities, budgetary decisions included. Among the most difficult challenges in designing corporatization today are perennial budget deficits that create technical inefficiencies at the level of the hospital and increase sectoral expenditures and effectiveness because hospitals do not assume any of the risk created by their investment decisions.

On the other hand, HDB's system of decision rights over finance left the hospital with enough maneuvering power to complement financial autonomy with agility and flexibility, in most areas. The minutes show a reasonable balance of clearance or *ex post* ratification of financial decisions made by the director versus discussions of investments and procurement decisions that were made shortly afterwards[31]. Among the problems with the system under Law No. 544 today is that it institutes formal, mostly *ex ante* controls, instead of accountability, and results in rigidity at the level of the hospital if the letter of the law is to be followed. The reason is that the law was partly written to control bandit hospitals by granting them "legal" boards, but the drafting of the legislation did not draw lessons from the better performing hospital which was the leading edge of change. As a result of some straightjacket provisions in Law No. 544, the inclination on the part of some newly corporatized hospital managers has been to ignore the more constraining portions of the system. For example, while the decrees specify the number and types of divisions a hospital should have, the newly created boards are ignoring this provision and adopting organizational charts that suit them.

[31] It is arguable that the allocation of fee revenue became "too agile" near the end of the experience, as ALSM members became less passionate about the strength with which they held their decision rights, and allowed them to be diluted.

But not all of HDB's decision rights were complementary. This is revealed by the manner in which HDB's new decision rights were shared between the director and the ALSM, and how this distribution evolved over time. In finance, two areas of decision rights were constant over time. These were "fee collection" and "exemption policy". Interestingly, the allocation of the decision right over the organization of "fee collection" was very much along the lines of what one expects to see in a modern competitive hospital. The ALSM helped the director set up the system at the outset, then he took it over and made administrative and procedural changes over time. The ALSM would periodically raise questions when there appeared to be slippage, as shown in the minutes of meetings.

Mostly a hospital board function, the setting of fee "exemption policy" was held by the director of HDB. Initially, the ALSM co-held this decision right in a very weak manner, by preferring that total exemptions not exceed one percent, a clear concern for equity considerations, however mildly expressed. When asked why this occurred, the director explained that he needed to retain this decision right because he was the one in touch with the day-to-day workings of the hospital and because he needed to make decisions quickly, often based on whether people "looked like" they could afford to pay or not. However, the director's holding of this decision right, and its *ad hoc* implementation, were symptomatic of HDB's inability to formulate and apply broad policies, and grow beyond its "small hospital mentality". Most hospitals of HDB's size employ a social worker who implements board policy in granting exemptions, and HDB eventually hired one.

As this analysis will show, there were not many illogical decision rights distributions between the director and the board at HDB, however when they did occur, they resulted from the predominantly "crisis-management" style of operation at HDB. Curiously, the ALSM experiment was begun in response to a financial and service delivery crisis in the sector, but its informality prevented it from moving beyond the "make-do" mode into the establishment of long-term thinking in management and finance. These are instances of decision rights that were not exercised in the manner in which they were first conceived, and where complementarities were foregone.

Two areas of decision rights evolved over time. The first and most important of these was the decision right over the "allocation of fee revenue". During the first two years, partly due to enthusiasm, partly due to the liquidity of its funds, the ALSM was involved in lengthy and lively debates on how funds should be allocated. By 1993, these debates had stabilized into discussions of recommendations made by the director, and decisions based on these recommendations that included prioritization of

expenditures and disbursements to settle accounts payable, along the lines of the modern board.

However, by 1996, ALSM revenues were hardly enough to cover the wage bill and there was very little room left for prioritization of expenditures; the ALSM became mostly a repository of funds. The reason why this occurred is partly due to HDB's inability to plan and implement a long-term strategy, partly due to perverse competition it faced from the MOH, and partly due to changes in the economy and gradual decrease in time allocated by ALSM members to fundraising. In the area of "solicitation of outside funds", the ALSM started out by being a strong holder and exerciser of this decision right. It gradually lost interest and the capacity to carry out this role, and near the end, there was very little activity in this area and the decision right was diluted[32].

The informality of the experience was both a boon and a bane. To illustrate, the ALSM considered adopting an important decision right that boards normally enjoy, but it did not succeed in doing so and the opportunity to benefit from the complementarity was missed. This was the right to design long-term financial policy. During its first year of operation, an effort was made to produce a budget forecast, but this was abandoned for two reasons:

The only ALSM member with a finance background stopped participating two years into the experiment;

The informal status of the ALSM never allowed it to think about long-term horizons[33].

Indeed, in all areas of hospital management and finance discussed in this paper, the ALSM was weakest on the planning and strategy side, largely because of its informality but also because of its skill mix and because of its preoccupation with accommodation as a pillar of the ALSM's survival. This accommodation was of two sorts, one between ALSM members, including the *ex officio* director who had appointed the members, and one with ministry officials. Accommodation came at the expense of bold development and strategic moves, and it did not allow the ALSM to develop and exercise a full governance role.

[32] As for the decision right over fee setting, it is clear from the data that the initial work done in setting fee schedules was spearheaded by the support committee, and that the first set of adjustments were as well. This decision right was perhaps heavily contested as it alternated between the director and the ALSM for a while. Unfortunately, the minutes of meetings provide no conclusive evidence here.

[33] There were continual calls to shut down all SC-like activities by central government inspection agents during the 7-year tenure of the ALSM at HDB. The experience of another innovative program, the Fondo de Desarrollo Vecinal in Chile was similar (Eid 1996, 1999b, 2000).

5.2 Human Resource Management

By the late 1990s, apathy was prevalent among employees in the Lebanese public sector. During the war, people had difficulty getting to work, public sector wages were eroded by inflation and compressed, public sector arrears in wage disbursement were common. When salaries were disbursed, they sometimes went to dead people because personnel rosters were not updated periodically. These factors encouraged moonlighting, absenteeism, and/or the establishment of private businesses alongside public sector jobs.

To motivate its staff HDB created decision rights in the area of human resource management that allowed the hospital to emulate the private sector. Some of the decision rights HDB created granted bonuses to MOH hospital staff, and others allowed the hospital to hire its own (non-civil service board/MOH) staff, compensate them according to market rates, then discipline and fire them for inadequate performance. Table 4 summarizes HDB's bundle of decision rights in the area of human resource management. Between 1991 and 1997, an average of 66 percent of the ALSM's contributions to HDB went toward HDB's wage bill, in the form of salaries and bonuses to non-civil service (private sector) employees and income supplements to civil service employees. The remaining 33 percent went toward various capital and operating expenditures (ALSM financial statements).

Using these decision rights, HDB designed an incentive program that improved the range and quality of care at HDB. Given that public sector staff often earned their pay without coming to work, HDB staff, including doctors who were civil service employees, received an income supplement if they came to work and fulfilled the service equivalent of the pay they were already receiving from the MOH. For physicians, this service equivalent was calculated using the system of Ks described in footnote 31. For example these standards valued normal deliveries and appendectomies at 50K, and the fee for a single third –class K was set at US$2.50 in 1990 in the private sector[34]. HDB valued the K at US$1.14, i.e. less than half of what the physician would get in the private sector per K. MOH salaries of civil service doctors were divided by US$1.14 to derive the base number of Ks they "owed" the hospital, and they would get income supplements for any additional Ks they delivered at HDB.

The idea was two-fold: to encourage staff to come to work, and to encourage them to work more and earn "bonuses". For example, in 1990, nurses hired from the private sector received salaries of LL120,000 (US$414.00) per month, and nurses who were

[34] Today the third-class K is valued at LL8,000 (USD5.30).

civil service staff received an income supplement of LL70,000 (US$241.00) per month to compensate for the difference. A similar incentive pattern was followed, and updated over time for administrative staff, technicians, drivers, housekeepers and guards at HDB. This compensation policy was the ALSM's most significant investment in HDB, and allowed the hospital to hire an average of 50 percent of its staff from the private sector, and to expand service delivery and service mix. Table 5a shows the proportion of ALSM expenditures going toward the wage bill for the period 1991-1997[35].

As a result of the gradual improvement in the number and quality of its staff, HDB saw a decline in the average length of stay (ALOS), an increase in the number of patients admitted, an increase in average birth rates, and an increase in the number of lab tests carried out.

Explaining HDB's decision rights complementarities in HRM

By 1993, HDB had settled into a strong and logically allocated set of decision rights in HRM. An initial attempt to give the ALSM a screening and oversight role in the hiring of all staff was resisted by management according to results from the decision rights analysis interviews. By 1993, only senior administrative staff and attendant doctor HRM matters were cleared by the ALSM. The remaining decisions in hiring, promotion, discipline, and firing were taken by the director, who would inform the ALSM of his decisions *ex post*. The director was also granted some important decision rights in internal organizational matters – rights that complemented others in increasing HDB's service delivery and expenditure capacity. For example, the process of streamlining and organizing the stockroom, the pharmacy, and the kitchen involved the stripping of decision rights from one area of the administration and their reallocation to different, more appropriately trained staff members. The director enjoyed strong decision rights in this area and the ALSM supported him. Other, similar complementarities were created in HRM but will not all be listed here.

However by far the most important complementarity created in HRM is one that is most difficult to design in a public sector organizations: with the creation of the ALSM, HDB became a residual claimant of its own, newly created revenue. None of this revenue was claimed (nor was it technically "claimable") by the MOH, despite calls by doubtful central inspection and regulatory agencies to put a stop to all support committee-type activities and collect their funds. While this revenue could not be redistributed among the leaders (owners) of the innovation - the ALSM members and the HDB director - they were free to determine its redistribution within HDB. These rights were a source of power, and they constituted an intangible, non-pecuniary but distributable surplus that combined a sense of satisfaction with pride at having made positive changes to the public hospital the ALSM members adopted. When this non-pecuniary surplus dried up, as the informality of the experience became more of a liability than an opportunity, the ALSM resigned[36]. The HDB experience points to the necessity of ensuring that a surplus of some (non-pecuniary) form accrue to board members. Politicization and power imbalances can seek to reduce the influence of board members and quell initiative, just as excessive bureaucratization and controls can.

Still more interesting, and more delicate, was the pairing of control and claimant rights for the director - a result that is not easy to replicate in the public sector without risking abuse. HDB achieved this by allowing the director's income supplement (bonus) to increase as the hospital's cash flow augmented. Interestingly, this scheme was closer to a re-distributive surplus than to an incentive plan because it was never contracted for. Not surprisingly, some of the more successful cases of hospital corporatization entail incentive compensation schemes for directors and staff. For example, in some hospitals in Catalunia a proportion of the director's salary is linked to hospital profits (Via, 1999).

While the use of incentive pay permeated the entire HDB experiment, it was more successful in some areas than in others. Among the rights considered, but not fully adopted, was the use of incentive pay as a fine disciplinary measure. According to interview data collected, the intention was to grant bonuses only when they were deserved. For example, an attempt was made by the ALSM to implement a system of monitoring physician hours spent at the hospital, and minutes of meetings mention consideration of purchasing a device for this purpose (Minutes, 15.V.95). However, the hospital director, a physician himself, did not allow the ALSM to exercise this decision right. During interviews, he explained that he resisted this change because he felt it was impossible and unreasonable to try to monitor physicians in this way. Regardless of whether this particular measure was reasonable or not, the director's inability to take strong disciplinary measures at HDB was characteristic of a range of difficulties encountered in superimposing an autonomous institutional design onto a centralized design. There were limits to the range of complementarities that could be

[35] Because of the surplus of doctors in Lebanon, this incentive system worked less well for doctors at HDB than it did for paramedical, administrative and support staff.

[36] Indeed what is remarkable about this experience and the limited experience with corporatization in Lebanon to date is that there is no dearth of people interested in improving the operations of the public sector, given the right conditions and incentives. If well designed, corporatization of hospitals has enormous potential in Lebanon, especially given entrepreneurial skills present.

created informally because of the systemic, capacity and process constraints discussed in Section 2.

By 1996, HDB staff had come to see the income supplement policy as a right, and it was no longer producing the productivity effects that helped transform HDB in the early 1990s. In addition, the decline in HDB's revenue weakened the power of incentive schemes the ALSM was able to offer through salaries. It also weakened the *raison d'être* of the ALSM, and further reduced its leverage over the director. However, while HDB attempted incentive compensation, other informal experiences did not, and the new system contains no provision that explicitly links pay to performance.

5.3 Procurement

All reports on the state of public hospitals by the end of the war in Lebanon point to severe mis-matches between inputs required and inputs available (asset non-complementarities) that precluded the hospitals from responding to demand in health service delivery (Jabbour, 1994). This situation was due to delays in central administration financing and procurement, exceedingly complicated processes for the delivery of inputs to public hospitals (as described in Section 4), inadequate information processing, etc. Table 6a summarizes HDB's decision rights allocation in the area of procurement. HDB's creation of decision rights in procurement complemented its HRM decision rights in allowing the hospital to behave like a private sector hospital. If it ran out of certain types of drugs, needed syringes, sutures, or maintenance services, HDB was able to make the decision to purchase them from the market immediately, instead of going through the process of requesting them from the MOH central stock. As such, HDB slowly developed a reliable and loyal supplier base in the market for hospital inputs. HDB suppliers were so pleased at the timeliness with which accounts payable were settled, that they often made donations to HDB functions and provided discounts or inputs at no charge.

Table 6b presents a comparison of HDB procurement financed by the ALSM versus HDB procurement financed by the public sector, for a six-month period at the height of the HDB experiment in 1994. The figures show that 50 percent of the cost of HDB procurement was covered by the ALSM, while 48 percent came from the MOH[37].

Explaining HDB's decision rights complementarities in procurement

All results from the Decision Rights Analysis Interview Framework point in the same direction. Decision rights over procurement reached a quick equilibrium after the first year of the ALSM's operation and were not contested much after that. In the areas of medical and other consumables, decision rights were exclusively held by the director, whose decisions the ALSM would discuss and disburse on *ex post*. These decision rights were essential to improving HDB's allocative efficiency and they complemented decision rights in finance by giving HDB the flexibility to respond to demand. The results in service delivery were clear. In the area of major medical and other fixed equipment, the decision right was held by the ALSM, which would explore alternative investments and seek prices based on recommendations made by the director for expansions in HDB's service mix. This decision rights allocation was also in conformance with the operations of today's competitive hospitals.

Despite the great leap forward HDB made in procuring the inputs it needed to operate, this hospital and its ALSM were not as successful in complementing procurement capacity with procurement planning and systems. For example, the ALSM tried several times, but failed to adopt decision rights necessitating local competitive bids before procurement transactions were undertaken (Minutes 4.I.91; 10.VII.96).

Several reasons were given for why these rights were not adopted. The director agreed that food procurement contracts would have been preferable, but said that the nuns in charge of the kitchen were used to asking the hospital driver to go out and buy food everyday, and he was not able to impose a different system on them, especially given the expansive powers they had enjoyed in running HDB until recently. A member of the ALSM said that procurement of generic low-cost medicines was resisted by physicians who practiced at HDB and wanted their own name brands of medication. The hospital administrator said that LCB could not be practiced because they were never sure of demand, and that they preferred getting special breaks from suppliers they knew. All of these statements point to the same direction: due to lack of middle management capacity general uncertainty, HDB had a difficult time looking beyond the short term. Similar other non-complementarities existed in the area of procurement. But while at HDB attempts were made to establish systems, there is no

[37] Because some of the items procured for HDB by the public sector are sent to the hospital without information about their cost, Table 6b required extensive efforts to compile, especially in gathering cost information for centrally procured items and services delivered by the MOH and the Ministry of Public Works. Both the former and current director of HDB have estimated that the share of non-ALSM expenditures in HDB procurement has continued to decline over time, and that the hospital was virtually completely financially independent by the time it was legally corporatized in July, 1999 (Interviews with Edouard Abboud and Edouard Chalouhi, former Directors of HDB).

By 1995, the ALSM's capacity to cover HDB's expenses became so well recognized and relied upon by the MOH that the ALSM was asked to settle a bill for laundry services on behalf of the MOH! Given the collaborative relationship between the MOH and the ALSM members at the time, the request was fulfilled and the amount of LL18,000,000 (USD13,891) was paid off (ALSM Minutes of Meetings, 28.VII.95).

record of such efforts in the informal experience. Under the new law, a different set of non-complementarities exists because of excessive controls, and similar set of complementarities could come about because of inadequate hospital management hiring and board appointment practices.

5.4 Service Delivery

When HDB first embarked on its autonomy path, it was able to offer minor surgery if patients brought their own sutures and medicines. The sterilization equipment it had dated back to the 1940s (World Bank survey). At this time, HDB was able to offer limited opthalmological care, had an average of 10 births per month, treated war emergencies and had the capacity to carry out simple lab tests and x-rays. There was no systematic quality control, and HDB staff had little contact with the community. The little contact HDB had with other hospitals occurred when patients were referred away from HDB because it did not have the capacity to treat them. Table 7 summarizes HDB's decision rights allocation in the area of service delivery.

By the end of 1997, HDB had expanded its service mix to include orthopedic surgery and plastic surgery, chemotherapy and physiotherapy and had developed a fully equipped up-to-date intensive care unit. These services, in addition to abdominal and pelvic ultrasound, gastroscopic, and broncho-fibroscopic tests, changed the service and fee schedule, used as an example in Table 3, into a longer and more sophisticated list. By this time, HDB had carried out at least two quality control initiatives and two customer satisfaction surveys which yielded satisfactory results (Minutes 3.X.94; 28.X.96). It had received visits from at least three public hospitals that had come to learn about the ALSM's accomplishments at HDB.

Explaining HDB's decision rights complementarities in service delivery

All ALSM members concurred on the distribution and evolution of decision rights in this area. Decision rights over the range of services and quality control (medical and other services) were held by the director for the majority of the period. For example, the director would propose expansions in service mix to the committee, but his informational advantage gave him significant influence in convincing the committee of what was feasible and reasonable at the hospital at the time. There is some evidence that during the first two years of the experience the ALSM took more initiative than during the latter period in promoting new services and in ensuring quality control through the administration of surveys, especially in medical areas. As did others, these decision rights were diluted over time and stabilized into a less active role for the ALSM. There is some evidence that near the end, the ALSM had too little intervention in service delivery and quality control in the hospital, as no surveys were carried out and efforts to start a pediatric department came to naught. Of all four areas discussed in this section, complementarities were fewest here.

6. Taking Stock of HDB's Complementarities

This section sums up the most salient complementarities developed at HDB and compares them with the informal system as well as with the system under Law No. 544. Neither this section, nor Table 8, are meant to be comprehensive. Instead they illustrate key examples suggestive of the type of analysis that can be carried out using the decision rights approach. Nor do Sections 6 and 7 seek to present HDB as a model or "ideal type". Instead, they underscore that HDB's institutional design is worth understanding because it designed by HDB locally, (not by the MOH) in reaction to market and systemic forces, somewhat like a firm in a market adopts the structure that maximizes its chances of success.

Take the two examples of complementarities under systemic effectiveness. The individuals constituting the ALSM where by no means the perfect choice, however they served HDB well in that they were not politically appointed, they were not subject to political influence and were successful professional concerned about their reputations. This is not impossible to replicate under the new system, but it is difficult because all selections are made by the minister and changes in ministerial appointments will most certainly lead to changes in boards, creating the additional problem of stripping institutional memory fairly frequently. An improvement on the HDB experience would have been to establish a competitive and transparent system for the selection of board members. Name banks in the UK are such examples. The experience to date demonstrates that the choice of the ministry delegate - a key board member whose role is to align the objective function of the hospital with that of the sector - has ranged from being excessively politicized to being an average bureaucrat with low powered incentives. At least the choice of this individual should be made more carefully (See Eid, 1999a).

Also complementing the set of decision rights that made HDB autonomous, were a set of rights that made it independent, beginning with the right to bypass regional administrative clearance requirements, granted by the minister at the outset. HDB's independence gave it commensurate power to exercise the decision rights that made it autonomous. In contrast, according to Provision No. 10 of the Finance Decree under Law No. 544, the hospital board has no right of appeal if the decisions it makes do not receive clearance from the ministry of finance. In relation to the budget, Provision No. 24 of this same decree allows the minister of finance and/or the minister of Hhealth to recommend that the council of ministers freeze line items in hospital budgets already ratified and allocated. These sorts of measures come at the expense of hospital

independence and are in stark contradiction with the objective of improving local performance through initiative and innovation. Similar points can be made about the remaining sample of complementarities listed in Table 8.

7. Policy Lessons: Benchmarking the HDB Experience

The benefit of studying innovation, is in the ability to discern key elements that can inform the theory, and in the opportunity to generalize from outlier to concept instead of from case to population based on a random sample (Yin, 1994). This section concludes by benchmarking the HDB experience against trends in hospital governance to draw lessons for the reform of the institutional design under Law No. 544. Table 9 expands on an original table developed by Shortell (1989) which compared industry boards with traditional hospital boards in order to highlight the differences and suggest ways in which hospital boards might evolve in the face of market competition. The more recent literature on boards confirms that the direction suggested ten years ago was in fact viable, and has proven to be necessary (Taylor, Chait and Holland, 1996).

Table 9 reveals good news and bad news about the Implementation Decrees under Law No. 544 in Lebanon. The good news is that boards are small in size, their meetings are relatively frequent, and their members are remunerated (although the real incentive may in fact be of a more important, non-pecuniary currency). The bad news about hospital boards in Lebanon is that the law does not guarantee that they be expertise-focused at a time when expertise has become the single most important asset a board member can bring to a hospital (see Appendix A, Eid, 1999a). In addition, the system places no limits on board term renewal and risks creating boards that are either politically representative or politicized, but not necessarily expertise focused. The system also transfers very little financial risk to the hospital manager and board, and results in cumbersome decision-making because of excessive *ex ante* controls (Eid, 1998; Mubarak, 1999). Furthermore, the system does not yet define the distribution of decision rights between the board and the director, a problem that has lead to costly periods of decision rights dis-equilibrium in some cases, similar to the HDB experience at the outset. Nor does the system define a clear orientation in management or require a system of committees for the board. The default direction could become a process orientation (Table 9).

In contrast, despite its many points of weakness, HDB under the governance of the ALSM did not have a politicized board, it enjoyed flexible decision-making, and it assumed the full financial risk from its decisions. Furthermore, by 1994, HDB had settled into a clearly and logically allocated distribution of decision rights between the director and the board, as Section 5 showed, and it had a clear results-oriented direction, although at times it could not fully implement it. HDB also had a fledgling system of committees.

In contrast, the current legal structure brings to bare the risks of purely supply-driven institutional design through slow and irregular implementation and perverse incentives. Both the success and the limits of the HDB/ALSM design offer important lessons when designing a system top-down. For example, in all areas of decision rights, hospitals must have a clear distribution of prerogatives in order to avoid negotiations and the constant need for accommodation, processes with significant opportunity costs. This is true both at the level of relations between the director and the board, and at the level of relations between the hospital and the MOH and the MOF. In Lebanon today, this can be achieved partly through the drafting of the Internal Administration Decree, and partly through the elaboration and clarification, to hospital staff and management, of the model of hospital governance that the reform is looking to bring about. Similarly, decision rights in areas of design and implementation of broad hospital policies are important to define and stabilize early on, to ensure alignment of the hospital's objective function with those of, for example, the MOH and the MOF. Board member maximum term lengths and conditions for term renewal are important to clarify in ways that ensure continuity without compromising energy and enthusiasm.

In the area of human resource management, the HDB experience has shown the importance of designing remuneration as an incentive, and of using incentives as performance and disciplinary measures, instead of allowing them to become public sector entitlements or political rights. The new system in Lebanon creates this possibility, but the letter of the law does not ensure it will come about. Most notable, and least well defined, is the remuneration of the key position of the hospital director. For hiring below the level of the director, the decree on personnel has been found to be too rigid and constraining, while an important aspect of adapting to demand entails human resource flexibility. HDB's approach was to periodically review and set hospital staff needs at the level of the board (ALSM), depending on demand for services. A capacity constraint of HDB, and possibly of the new system is in middle management. At HDB, this was due to constraints discussed in Section 5. In the new system, it is likely to result from politicization in hiring practices, absent the eye of a benevolent minister.

This discussion also points to broader, systemic issues in satisfying the objectives of corporatization. For example, coherence in intra-sectoral policies is key. Among the market forces that HDB was unable to adjust to was a perverse price signal that resulted from the MOH subsidy of private sector treatment. Because the system of

obtaining permission for cost-reimbursement was simplified and had become widely publicized by 1995, patients could obtain private sector care in return for a co-payment averaging 15 percent, while they were required to "contribute" close to 50 percent at HDB. This extreme example illustrates the importance of sector-wide planning and strategy. Among the important next steps in reform today, is an analysis of how financially tenable corporatization is system-wide. Such a study would include forecasts of demand and revenue and estimates of profitability across public hospitals as a group, not just on an individual basis, and would be key to determining the extent to which the MOH can be expected to subsidize corporatized hospitals for a determined period of time.

At the hospital level, the capacity to carry out strategic and financial plans, requires more than a provision in a decree. Based on the HDB experience, neither the recognition that such tools were important, nor the desire to carry them out, were missing. What lacked was capacity - a problem we risk seeing once more under Law No. 544. Careful selection of skill mixes on boards, but perhaps more importantly, training and continuing education for board members are some ways of promoting good performance in this area.

Finally, the HDB case brings to light the importance of appropriate decision rights allocations, versus ownership in the contractual sense. In other words, writing the most complete contract possible through appropriate institutional design is more important in achieving the objectives of corporatization than the act of converting the legal status of a hospital into an autonomous one. Coherent decision rights complementarities are key. In the case of Lebanon, priority areas in amending the system can be cast in terms of rationalizing the contractual relationship between the ministry of health and its hospitals, and between hospital boards and hospital management. Decision rights allocations must complement, instead of contradicting each other, and produce the incentives necessary to improve performance. Practically, this can be done by relaxing constraints in some areas of the decrees and clarifying ambiguities in other areas. Another priority area is to establish a system that would function beyond the presence of altruistic leaders interested in improving the sector. This stage is otherwise understood as the process of "institution building".

Appendix A
Functions of Boards and Directors in Corporatized Hospitals

1. Overview

This note provides a brief background on different types of hospital boards and enumerates the functions of the model most prevalent and most successful in health care delivery today.

The oldest, most traditional type is the "caretaker/benefactor – philanthropic" board, composed of community notables who used their influence to raise funds for their hospitals. Members of such boards perceived the hospital as an extension of their social interests and derived a significant degree of prestige from their role.

Another type of board is the "representative" board, which became popular in the 1960s, but has now been abandoned in many countries. Members of this type of board were popularly elected, sometimes on an electoral ballot alongside municipal elections. The reason why this type of board has proven ineffective is twofold: (1) local elections do not necessarily guarantee the selection of "the most knowledgeable" in hospital management. Instead, they result in the election of the most "popular" at the local level, who may or may not be the most "knowledgeable" in health matters. (2) The issues that tend to attract local votes, such as the addition of a new wing to a hospital, do not necessarily improve quality and/or access, and may even hinder such goals.

Still another type of board is the "alternative career" board. Typically, these boards were dominated by individuals who saw their board involvement as a way to further their own careers – whether as local banker, newspaper publisher, or real estate agent. Often, such board members would become overly involved in the details of hospital operation – much to the chagrin of the hospital manager. This type of board is similar to what is sometimes described as a "management" board.

None of these types of boards necessarily existed in pure form – often combinations would exist. What is certain is that the benign, non-competitive environment in health care delivery allowed these forms to exist and many hospital managers felt no pressure to change them. Today, this is no longer true as hospitals attempt to reposition themselves to face the difficult challenge of meeting efficiency and profitability requirements in competitive markets without compromising quality and equity.

The model most hospital boards are converging toward today is that of a strategic director, "corporate" board. Members of such boards are a collection of relevant areas

of expertise, mentors, evaluators and risk-takers. Rather than being overly concerned with process issues, today's boards must think and act strategically. Issues must be prioritized quickly, linked interdependently and always considered in relation to the competition. Rather than just being a caretaker with influential links to the community, today's board must include expertise in marketing, finance, law, accounting, economics, medicine and related areas to guide and oversee the strategic direction of the hospital. Instead of board membership as an alternative career, today's board members must see their involvement as a term that is limited in time, during which they provide mentoring to the director without micro-managing him or her, hold the hospital accountable for its behavior and evaluate the director's performance. Finally, instead of being overly concerned with structure and process, today's boards must spell out and continually update roles and responsibilities based on the hospital's mission and strategic plan, and not on an artificial and rigid separation of board, management and professional staff functions. The definition of roles and responsibilities should not preclude members of these three groups from working as a team, with a sense of shared responsibility and credit for the success of the hospital. In sum, the emphasis needs to be more on expertise, accountability, vision and strategic direction, external focus and the ability to compete, and innovation coupled with rapid decision-making. With some amendments, the autonomous structure granted to public hospitals in Lebanon today will allow for all of this.

Some broad lines for the definition of prerogatives. These lists are meant to be suggestive, not comprehensive or prescriptive.

2. Functions for the Board

The establishment and continual adaptation of the broad strategy and long-term direction of the hospital taking into account the macro and local competitive environment, as well as sectoral priorities based on the ministerial directives and instruments such as the *Carte Sanitaire*;

The establishment and periodic updating of the organizational structure of the hospital;

The appointment of senior positions in the hospital, upon the recommendation of, and in consultation with the director;

The oversight of hospital management by the director through jointly agreed upon targets for performance;

The development of a business plan/"*projet d'entreprise*"/"*mukhattat tawjihi*" for the annual (short-term) implementation of the hospital's long-term strategy, with a view to ensuring the financial viability of the hospital. The development of this plan should be the responsibility of an ad hoc committee jointly represented by some board members and some hospital senior staff, including the director. Adoption of the plan is to be subject to a board vote.

The monitoring of hospital performance, through careful periodic analysis of the following areas:

a. Finance: audited annual reports and budget projections (taking into consideration financial targets set by the board);
b. Human Resource Management: periodic staff satisfaction surveys, staff performance and productivity measures and ratios, including the director;
c. Procurement: periodic monitoring of purchasing effectiveness and the relative (market) costs of hospital inputs;
d. Health Care Delivery: periodic revisions of the mix of services provided, possibilities for expansion or the need for contraction depending on the environment, monitoring of quality through patient satisfaction surveys and periodic spot audits in hospital wards.

In none of areas a-d, is it recommended that board members actually carry out the functions described. The role of board members is in the planning, definition, timing, contracting out, and subsequent revision and evaluation of results from reports requested. Their role should also include:

The setting of fee exemption policies;

community outreach work, including contacts with philanthropic and corporate sponsors;

coordination with the ministry of the health, through the ministry delegate;

coordination with other hospitals, with the hospital director's participation.

3. Functions of the Director

Broadly speaking, the director is accountable to the board for execution of board decisions and for the overall performance of the hospital according to jointly agreed-upon targets, financial and otherwise. To do so, the director is empowered by the board to make all decisions relevant to this role, enumerated below. As such, the organization of hospital administration is the prerogative of the director and constitutes a very important "tool" the director uses to produce the output agreed upon with the board.

Finance: Ensuring reliable fee collection (no leakage) and accounting for revenues, through the proper assignment of responsibilities for these functions within the hospital administration. If not taken care of through annual budget discussions, the making of expenditure decisions below thresholds agreed upon with the board. These

decisions range from petty cash to routine disbursements to emergency purchases. Thresholds are a function for hospital and budget size.

Human Resource Management: Within agreed upon budget envelopes, the director makes all decisions related to the hiring, reallocation, promotion, discipline and firing of non-senior staff. Decisions related to senior staff require a board vote. The director makes these decisions based on prior agreement with the board as to what constitutes senior staff. Policy issues such as the strength of incentive pay (bonuses) and the aggressiveness of hiring policy are also subject to board discussions, and so are internal organizational decisions involving HRM, such as the formation of staff committees, etc.

Procurement: Again, below agreed-upon expenditure thresholds, the director should have the flexibility to procure categories of medical consumables, non-medical consumables, minor medical equipment and some fixed equipment. Also below certain thresholds the director has the prerogative to procure maintenance services, especially if they are of an emergency nature.

Health Care Delivery: Quality control, both in medical and non-medical services is the function of the director. The evaluation of quality control practices is the function of an outside reviewer commissioned by the board, as outlined above. Decisions on the range of services provided, as well as the relative emphasis of services provided are to be made jointly by the director and the board, with careful consideration of the director's recommendations. The evaluation of the choice and range of health care provision, as outlined above, is to be carried out by an outside reviewer commissioned by the board and agreed upon by the director.

References

Aghion, P. 1995. "Formal and Reality in Organizations." Oxford University. Mimeo.

Agion, P. and M.Dewatripont and P.Rey. 1994. "Renegotiation Design with Unverifiable Information." *Econometrica*, Vol. 62: 257-82.

Alchian, A. and H. Demsetz. 1972. "Production, Information Costs, and Economic Organization." *American Economic Review,* Vol. 62, No. 5: 777-95.

Chandler, A.D. 1990. *Scale and Scope: The Dynamics of Industrial Capitalism.* Cambridge, MA: Harvard University Press.

Coase, R.H. 1937. "The Nature of the Firm." *Economica,* Vol. 4: 386-405.

_____. 1960. "The Problem of Social Cost." *Journal of Law and Economics and Organization,* Vol. 4, No. 1: 33-47.

Crémer, Jacques. 1994. "A Theory of Vertical Integration Based on Monitoring Costs." IDEL. Mimeo.

Crémer, Jacques, Antonio Estache and Paul Seabright. 1995. "The Decentralization of Public Services: Lessons from the Theory of the Firm" in Antonio Estache (ed.), *Decentralizing Infrastructure: Advantages and Limitations*, World Bank Discussion Paper No. 290. Washington, D.C.: World Bank.

Dewatripont, M. 1989. "Renegotiation and Information Revelation over Time: The Case of Optimal Labor Contracts." *Quarterly Journal of Economics,* Vol. 104, No. 3: 589-619.

Dewatripont, M. and J. Tirole. 1994. "A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence." *Quarterly Journal of Economics,* Vol. 109: 1027-54.

Eid, Florence. 1996. "Explaining Innovative Management in a Decentralized Public Sector: A Contract Theory Approach." Unpublished paper.

_____. 1999a. "Governance and Incentives in Corporatized Public Hospitals: The Case of Lebanon." Unpublished paper.

_____. 1999b. "Implementing Municipal Policy Reforms: The Fondo de Desarrollo Vecinal of Conchalí, Chile and the Problem of Elite Capture in Promoting Participation." *Colloqui.* Spring.

_____. 1999c. "Innovation and Good Governance in the Public Sector: Dahr el-Bachek Hospital." May 14. Beirut, Lebanon: *Al-Nahar*.

_____. 2000. "Changing the Managerial Mindset: The FONDEVE in Conchalí, Chile" in Tim Campbell and Harald Fuhr (eds.), *Making Decentralization Work: Innovations in Local Government in Latin America.* Washington, D.C.: The World Bank. Forthcoming, Spring.

Fudenberg, D., and J. Tirole. 1991. *Game Theory*. Cambridge, MA.: MIT Press.

Geddes, Barbara. 1994. *Politician's Dilemma: Building State Capacity in Latin America*. Berkeley, CA: University of California Press.

Government of Lebanon. 1959. Decree No. 112. The Organization of Personnel in the Public Sector. (Also referenced as “The Personnel Decree.”)

_____. 1961. Decree No. 8377. “The Organization of Ministry of Health.” (Also referenced as “The MOH Decree.”)

_____. 1963. The Public Accounting Law as Defined by Decree No. 14969. Section No. 2: Procedures for the Preparation of the Annual Budget Law.

_____. 1972. Decree No. 4517. “Defining the Establishment and Operations of Public Enterprises and Autonomous Agencies.”

_____. 1996. Law No. 544. “Mandating the Establishment of Public Enterprises for the Management of Ministry of Public Health Hospitals, and its Implementation Decrees.”

Grossman, S. and O. Hart. 1986. “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration.” *Journal of Political Economy,* Vol. 94: 691-719.

Hansmann, H. 1996. *The Ownership of Enterprise*. Cambridge, MA: Harvard University Press.

Harding, April and Alex Preker (eds.). 1999. “Conceptual Framework for Reforms in Health Care Delivery.” *Innovations in Health Care Delivery: Organizational Reforms Within the Public Sector*. Washington, DC: The World Bank. Forthcoming.

Hart, O. and B. Holmström. 1987. “The Theory of Contracts” in T.F. Bewley (ed.), *Advances in Economic Theory*: 71-155. Cambridge: Cambridge University Press.

Hart, O. and J.Moore. 1988. “Incomplete Contracts and Renegotiation.” *Econometrica,* Vol. 56: 755-86.

Holmström, Bengt. 1979. “Moral Hazard and Observability.” *Bell Journal of Economics,* Vol. 10: 74-91

Holmström, Bengt and Paul Milgrom. 1990. “Regulating Trade Among Agents.” *Journal of Institutional and Theoretical Economics,* Vol. 146, No. 1: 85-105.

Jabbour, Cyrille. 1996. “Hospital of Dahr El Bachek: The Firm’s Project.” Unpublished report written as part of the MOH’s World Bank Project.

Joskow, P.A. 1985. “Vertical Integration and Long Term Contracts: The Case of Coal-Burning Electric Generating Plants.” *Journal of Law, Economics and Organization,* Vol. 1, No. 1: 33-80.

Klein, B. 1988. “Vertical Integration as Organizational Ownership: The Fisher Body-General Motors Relationship Revisited.” *Journal of Law, Economics and Organization,* Vol. 4, No. 1: 199-213.

Klein, B., R. Crawford and A. Alchian. 1978. “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process.” *Journal of Law and Economics,* Vol. 21, No. 2: 297-326.

Kreps, D. 1990. “Corporate Culture and Economic Theory” in J. Alt and K. Shepsle (eds.), *Perspectives on Positive Political Economy*. Cambridge: Cambridge University Press.

Krueger, Anne. 1974. “The Political Economy of the Rent-Seeking Society.” *The American Economic Review*, Vol. 64: II.

Milgrom, P. and J. Roberts. 1992. *Economics, Organization and Management.* Englewood Cliffs, NJ: Prentice-Hall.

Sabbagh, Wajih. 1986. “Dahr el-Bachek Hospital: Lebanon’s Experience with One of the Oldest Diseases, Tuberculosis.” *Al-Hawadith Magazine*. No. 1559.

Shortell, S. 1989. “New Directions in Hospital Governance.” *Hospital and Health Services Administration*, Vol. XXXIV: 1.

Taylor, Barbara, Richard Chait and Thomas Holland. 1996. “The New Work of the Non-Profit Board.” *Harvard Business Review*. September-October.

Williamson, O. 1975. Markets and Hierarchies: Analysis and Antitrust Implications. New York: Free Press.

Yin, Robert. 1994. *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage Publications.

Figure 1: The *de jure* Hospital Budget Preparation Process, Pre-corporatization[38]

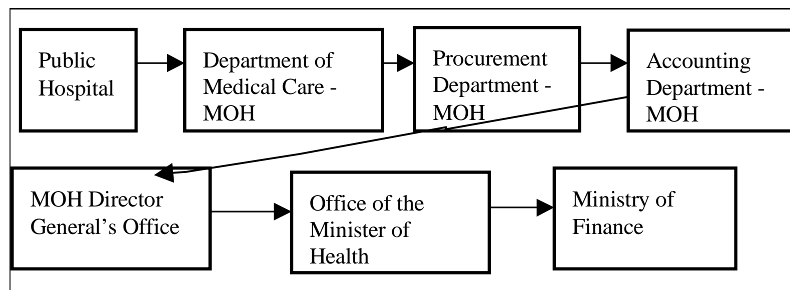
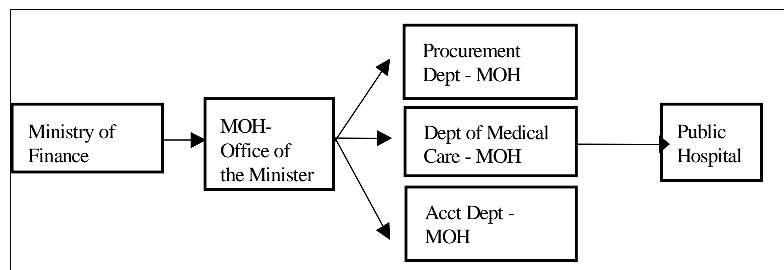


Figure 2: The *de facto* Hospital Budget Preparation Process, Pre-corporatization.



[38] The nuances between directorates, departments, divisions and services within the public administration have not been translated from Arabic, because the hierarchies they denote do not provide significant additional information to the discussion. Instead, the term "department" has been used for all offices. Readers familiar with the Lebanese public sector will know the differences.

Table 1: Centralized Decision Rights Allocations Governing Public Hospitals Pre-1996

	Ministry of Finance	Civil Service Board	Ministry of Health	Public Hospitals	Not Held
Finance					
Solicitation of outside funds					χ
Allocation of outside funds					χ
Fee setting for services					χ
Exemption policy					χ
Fee collection			χ*	χ*	
Allocation of fee revenue					χ
Human Resource Management					
Hiring		χ			
Promotion		χ			
Discipline		χ			
Firing		χ			
Procurement					
Medical consumables			χ		
Other consumables			χ	χ	
Major medical equipment	χ		χ		
Other fixed equipment	χ		χ		
Service Delivery					
Range of services			χ	χ	
Quality control			χ	χ	
Community outreach					χ
Coordination with other hospitals					χ

Note: The presence of two χs in one row indicates that a decision right was co-held; *This decision right existed (and was co-held) but was generally not implemented.
Source: Author's construction based on Law #14969, Decrees #112, #8377, #325 and the discussion in Section 4.

Table 2: HDB's Decision Rights Equilibrium in Finance

Rights Created	Solicitation of outside funds Fee setting for services Exemption policy Fee collection Allocation of fee revenue
Rights Appropriated	None

Source: Author's construction based on results from the Decision Rights Analysis Framework (Appendix A).

Table 3: Comparisons of HDB Fees with Average Third-Class Private Sector Rates in 1990 and 1994[39].

	HDB/ALSM Rates (1990)	Avg. Private Sector Rates (1990)	HDB/ALSM Rates (1994)	Avg. Private Sector Rates (1994)
Outpatient Care				
Minor surgery	11.38	14.00	K[40] + 12.14	36.00
Minor surgery (emergency room)	5.69	25.00	K + 6.07$^{\varphi}$ 15.18$^{\varphi\varphi}$	20.00
Plaster service	5.69	25.00	9.11	20.00
Emergency consultation	2.28	16.70	4.86	22.28
Regular consultation	1.14	12.50	4.86	16.5
X-ray	1.14	14.00	R^{η} = 0.12	16.00
E.C.G.	1.14	12.00	3.04	15.00
Laboratory	0.57 per analysis	2.00* 17.00-25.00**	L^{η} = 0.08	3.30* 25.00-37.00**
Inpatient Care				
Medical Ward		12.50/Day***	15.18/Day	22.00/Day***
Maternity Ward	5.69/Day	12.50/Day***	18.21/Day	22.00/Day***
Newborn nursery		10.00/Day***	6.07/Day	15.00/Day***
Surgery	11.38/Day	12.5/Day***	K = 1.21	22.00/Day***
Gynecology		12.5/Day***	15.18/Day	22.00/Day***
Intensive Care	11.38	60.00/Day***	15.18/Day	100.00/Day***

Notes: All figures are in US Dollars, converted using the exchange rates of the respective years. In 1990 the Lebanese Lira was 879.00 to the US Dollar. In 1994, LL1647.00 = One USD. In 1999, LL1508.00 = One USD; exchange rates were obtained from the Central Bank of Lebanon, courtesy of Youssef El-Khalil. * Minimum cost per single test; ** range for standard pre-operative/diagnostic tests; *** figures are for room and board only; $^{\varphi}$ fee if operation was carried out by surgeon. $^{\varphi\varphi}$ Fee if operation carried out by intern or resident. $^{\eta}$ Rs (for *Radiologie*) and Ls (for *Laboratoire*) are set and used in the same way as Ks. Different x-ray and lab procedures have different R and L values.

Source: Author's construction combining data from HDB and MedNet Liban[41].

Table 4: HDB's Decision Rights Equilibrium in Human Resource Management

Rights Created	Hiring (of non-civil service staff, including compensation) Firing (of non-civil service staff) Internal organizational decisions (committee formation, etc.)
Rights Appropriated	Promotion (bonuses to civil service employees, and pay increases for private sector employees) Discipline (mostly through financial incentives, this was an under-exercised function of the central administration and Civil Service Board)

Source: Author's construction based on results from the Decision Rights Analysis Framework (Appendix A).

Table 5a: ALSM Human Resource Expenditures as a Proportion of Total Expenditures

Year	Salaries & Bonuses	Total ALSM Expenditures	% of Total
1991	205,076,500	350,815,030	58
1992	402,432,500	712,284,489	56
1993	634,120,000	1,029,437,181	62
1994	896,305,500	1,225,381,642	73
1995	1,060,616,000	1,537,154,132	69
1996	1,078,964,000	1,488,575,505	72
1997	1,535,747,000	2,179,684,701	70

Source: Author's construction using HDB financial statements; figures are in Lebanese Lira (LL), unadjusted for inflation.

Table 5b: HDB Activity Figures

	Patients Admitted	ALOS*	Lab Tests	X Rays	E.C.G**
1988	657	6.4	3,893	6,237	779
1989	1,355	5.6	15,442	8,562	747
1990	2,372	5.3	38,566	16,025	1,249
1991	3,109	4.4	47,648	18,756	2,479
1992	3,799	3.8	53,330	22,535	2,692
1993	3,540	3.9	55,207	22,930	2,713
1994	3,220	3.9	60,832	22,580	2,763
1995	3,248	3.7	65,076	21,825	2,314
1996	3,037	3.5	54,769	19,018	2,028
1997	3,949	4.0	88,112	25,303	2,763
Avg	2,302	3.7	39,915	14,795	1,711

Note: * Shorter average lengths of stay (ALOS) are considered rough measures of improved efficiency. ** Ecocardiographs (ECGs) are routine tests carried out before most operations to examine the heart. Because they are routine they are good proxies for hospital activity.

Source: Author's construction using HDB data.

[39] In private sector hospitals, the cost of second-class service (B) is equivalent to the cost of third-class service (C) + 60%. First class service (A) = C + 180% (MEDNET estimates).

[40] The K system is determined by the Social Security Administration and the Lebanese Order of Physicians. It classifies each medical procedure as being equivalent to a certain number of Ks (for each of three classes of service). The idea behind the system is to achieve some consistency and equity in billing and remuneration for health care. For example, a third-class appendectomy and normal delivery are valued at 50K for all hospitals, throughout the country. Today the third-class K is valued at LL8,000 (USD5.30), and the scales are updated periodically.

[41] MedNet Liban is a third-party administrator that assists insurance companies in providing quality care at affordable costs. Access to MedNet Liban data was generously provided by Mounir Kharma and Hugette Daccache

Table 6a: HDB's Decision Rights Equilibrium in Procurement

Rights Created	Implementation of local competitive bidding
Rights Appropriated	Medical consumables Other consumables Major medical equipment Other fixed equipment

Source: Author's construction based on results from the Decision Rights Analysis Framework (Appendix A).

Table 6b: Sources of Finance of HDB Procurement

Goods and Services Procured	ALSM	MOH	Ministry of Public Works	Other
Salaries and bonuses	432,395,500	258,184,406		
Food items	5,993,895	28,500,000		
Fuels	4,012,235	19,273,240		
Oxygen and anesthetic products		14,670,000		
Maintenance of premises		6,851,600	6,000,000	
Equipment maintenance	14,339,085	2,147,770		
Furniture		3,000,000		
Stationery	4,976,320			
Miscellaneous supplies		64,650,000		4,536,000
Drugs	115,394,900	146,337,495		6,341,562
X-ray film	956,710	19,923,120		
Lab supplies	9,994,245	14,665,490		
Maintenance products & parts	1,449,555	12,097,250		
Water transport	9,315,000			
Miscellaneous	13,444,215			
Total	612,271,660	590,300,371	6,000,000	10,877,562
Grand Total Expenditures		1,219,449,593		
% of total HDB expenditures	50.2	48.4	0.5	0.9

Source: Author's construction, based on report produced by hospital administrator, Elias Nasr in 1994. All figures are in Lebanese Lira, unadjusted for inflation.

Table 7: HDB's Decision Rights Equilibrium in Service Delivery

Rights Created	Quality control, medical services Community outreach Coordination with other hospitals, including int'l ones Coordination with MOH
Rights Appropriated	Determination of range of services Quality control, other services

Source: Author's construction based on results from the Decision Rights Analysis Framework (Appendix A).

Table 8: Comparative Complementarities

Complementarities	HDB	SCs	Law #544
Systemic Effectiveness			
Autonomy + "Right People"	+	-	-+
Autonomy + Independence	+	-	-
Autonomy + Rational DR Distributions	-+	-	-
Finance			
Revenue Base + Accountability	+	-	-
Budgetary Flexibility + Expenditure Rules	-+	-	-
HRM			
Control + Claimant Rights	+	-	-
Fees for Service + Bonus System	+	-	-
Procurement			
Expenditure Rights + LCB	-	-	-
Expenditure Rights + Bulk Purchases	-+	N/A	N/A
Service Mix			
Service Mix Expansion + Community Outreach	-+	-	-
Cost Recovery + Quality Control	-+	-	-+

Notes: + = complementarity present; -+ = complementarity attempted, but not well developed; - = complementarity absent (non-complementarity); N/A= evidence not available/inconclusive
Source: Author's construction

Table 9: Comparison of Hospital vs. Contemporary Industry (Corporate) Boards

Traditional Hospital Boards	Industry Boards	HDB ALSM	Corporatized Boards Provided for under Law #544 in Lebanon
Large (14-50) Broadly representative	Small (7-10) Expertise focused	Small (7) Expertise focused, but inadequately	Small (5-9) Politically representative. Possibly inadequately expertise focused.
Long terms of office	Short term of office	Long term of office	Short, but renewable with no limits
Many committees	Few committees	Few committees	No committees provided for by design
Monthly meetings	Quarterly meetings	Weekly and/or bimonthly meetings	Weekly meetings and/or bimonthly meetings
2-3 hour meetings	6-8 hour meetings	2-3 hour meetings	2-3 hour meetings
Cumbersome decision making	Rapid decision making	Rapid decision making	Cumbersome decision making
Consensual orientation	Pragmatic orientation	Consensual orientation	Unclear orientation, elements of conflict to date due to differential political leverage and lack of definition of prerogatives
Stewardship orientation	Growth/Risk orientation	Mostly stewardship orientation Growth/risk orientation at the beginning	Unclear orientation to date. No fiduciary or legal responsibility to mitigate risk-taking
Process orientation	Results orientation	Results orientation	Unclear pattern to date. Legal structure is very process-oriented in key areas
Members seldom paid	Most members paid	Members not paid	Members paid

Source: Adapted from Steven Shortell, "New Directions in Hospital Governance," Hospital Governance 34:1 Spring 1989.

Appendix B
Decision Rights Analysis Interview Framework

Decision Right	Holder of Decision Right			
	Support Committee	HDB Director	MOH	Other
Finance				
Solicitation of Outside Funds				
Allocation of Outside Funds				
Fee Setting for Services				
Exemption Policy				
Fee Collection				
Allocation of Fee Revenue				
HRM				
Hiring				
Doctors				
Nurses				
Admin				
Support				
Promotion				
Doctors				
Nurses				
Admin				
Support				
Firing				
Doctors				
Nurses				
Admin				
Support				
DiALSMipline				
Doctors				
Nurses				
Admin				
Support				
Internal Org Decisions				

Decision Right	Holder of Decision Right			
	Support Committee	**HDB Director**	**MOH**	**Other**
Procurement				
Medical Consumables				
Other Consumables				
Major Medical Equipment				
Other Fixed Equipment				
Service Delivery				
Range of Services				
Relative Emphasis on Services Provided				
Quality Control - Medical Services				
Quality Control -Other Services				
Community Outreach				
Coordination with Ministry of Health				
Coordination with Public Hospitals				