

# **The Economics of Public and Private Roles in Health Care: Insights from Institutional Economics and Organizational Theory**

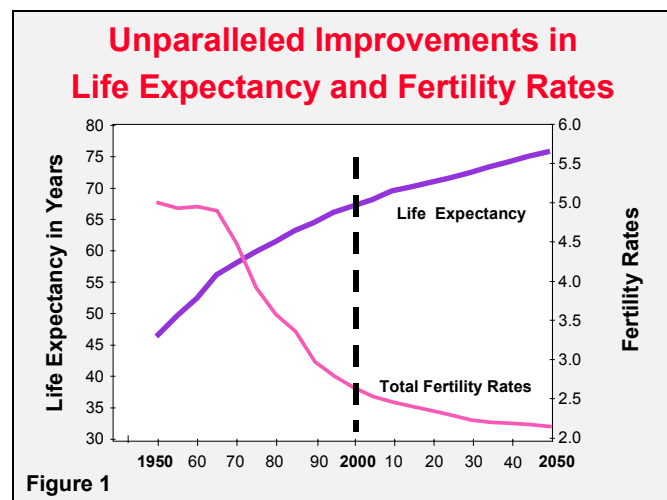
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**THE ECONOMICS OF PUBLIC AND PRIVATE ROLES IN HEALTH CARE:  
INSIGHTS FROM INSTITUTIONAL ECONOMICS AND ORGANIZATIONAL THEORY**

## A. A HISTORICAL SNAPSHOT

Advances in health during the past few decades are impressive. The increase in life expectancy and the decrease in fertility throughout the world have been greater in the past 40 years than during the previous 4,000 years (Figure 1). Life expectancy is almost 25 years longer today than at similar income levels in 1900.



These gains in health are partly the result of improvements in income and education, with accompanying improvements in nutrition, access to contraceptives, hygiene, housing, water supplies, and sanitation. As is described by the World Health Organization (WHO) in its *2000 World Health Report*, the achievements in health during the twentieth century are also a result of new knowledge about the causes, prevention, and treatment of disease, and policies that make known interventions more accessible.

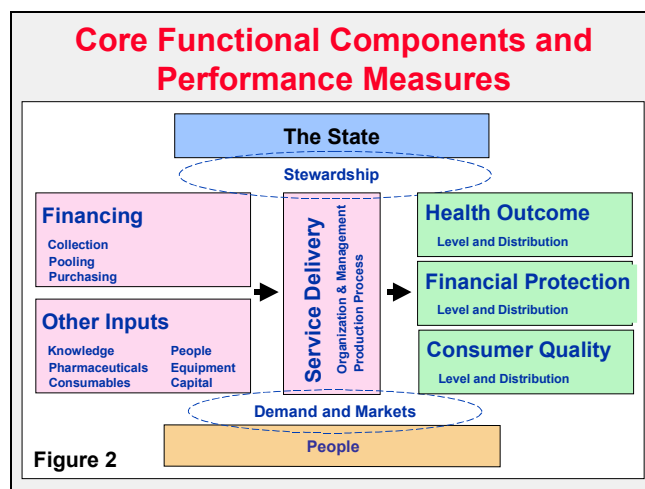
International experience indicates that the underlying cause of most threats to good health are well known today, and affordable drugs, surgeries and other interventions are often available, even in low-income countries. But, because of weakness in one or more of three core functions of health systems—*financing, generation of inputs, and provision of services*—potentially effective policies and programs often fail to reach the poor.

The financing function includes the collection and pooling of revenues and the use of these revenues, through purchasing or budget transfers to service providers. The resource-generation function includes the production, import, export, distribution, and retail of human resources, knowledge, pharmaceuticals, medical

equipment, other consumables, and capital. The service-delivery function includes both population-base and personal clinical services provided by the public sector and private sector (nonprofit and for-profit)

These core functions are influenced by governments through their stewardship function and by the population through demand and markets. The combined effects of these five factors lead to either good or poor performance in health outcomes, financial protection, and responsiveness to consumer expectations (Figure 2).<sup>1</sup>

Health systems are dysfunctional sometimes because of uneven development among the core functions and sometimes because of poor coordination and complementarity between the public and private sector.



We argue in favor of greater private sector participation in generating inputs and providing health services and a strong government engagement in securing equitable and sustainable financing as well as executing the “stewardship function.” In too many countries, these roles are reversed, with adverse effects on equity and efficiency.

### From Centuries of Minimalism ...

Ideological views on the roles of the state and the private sector belong to a long list of false antitheses in the field of medicine and health care.<sup>2</sup> Since the beginning of written history, the pendulum has swung back and forth between minimalist and heavy-handed state involvement in the health sector.

During antiquity, people used home remedies and private healers when they were ill. Yet, as early as the second millennium B.C., the *papyri* give fascinating evidence that Imhotep, archetypal physician, priest, and court official in ancient Egypt, introduced a system of publicly provided health care with healers who were paid by the community.<sup>3</sup>

This early experiment in organized health care did not survive the test of time. The *Code of Hammurabi* (1792–50 B.C.) laid down a system of direct fee-for-service payment, based on the nature of services rendered and the patient's ability to pay.<sup>4</sup> For the next three thousand years, the state's involvement in health care revolved mainly around enforcing the rules of compensation for personal injury and protection of the self-governing medical guild.<sup>5</sup>

At best, financing, organization, and provision of health care was limited to the royal courts of kings, emperors, and other nobility who might have a physician for their personal use and for their troops at the time of battle. The masses got by with local healers, midwives, natural remedies, apothecaries, and quacks.

### ... To Heavy-Handed State Involvement

Unlike this early private participation in health care, during the twentieth century, governments of most countries have become central to health policy, often both financing and delivering a wide range of care. Today, most industrial countries have achieved universal access to health care through a mix of public and private financing arrangements and providers.<sup>6</sup>

Proponents of such public sector involvement in health care have argued their case on both philosophical and technical grounds. In most societies, care for the sick and disabled is considered an expression of humanitarian and philosophical aspirations.

But one does not have to resort to moral principles or arguments about the welfare state to warrant collective intervention in health. The past century is rich in examples of how the private sector and market forces alone failed to secure efficiency and equity in the health sector.

Economic theory provides ample justification for such an engagement on both theoretical and practical grounds to secure:

- *efficiency*—since significant market failure exists in the health sector (information asymmetries; public goods; positive and negative externalities; distorting or monopolistic market power of many providers and producers; absence of functioning markets in some areas; and frequent occurrence of high transaction costs)<sup>7</sup>
- *equity*—since individuals and families often fail to protect themselves adequately against the risks of illness and disability on a voluntary basis due to short-sightedness (free-riding) and characteristic shortcomings of private health insurance (moral hazard and adverse selection).<sup>8</sup>

Largely inspired by western welfare state experiences such as the British National Health Service (NHS) and the problems of market failure, during the past 50 years, many low- and middle-income countries established state-funded health care systems with services produced by a vertically integrated public bureaucracy.

### ... Back to Neoliberalism of the 1990s

During the 1980s and 1990s, the pendulum began to swing back in the opposite direction. During the Reagan and Thatcher Era,<sup>9</sup> the world witnessed a growing willingness to experiment with market approaches in the social sectors (health, education, and social protection). This was true even in countries such as Great Britain, New Zealand, and Australia—historical bastions of the welfare state.

As in the ascendancy of state involvement, the recent cooling toward state involvement in health care and enthusiasm for private solutions has been motivated by both ideological and technical arguments.

The political imperative that has accompanied liberalization in many former socialist states and the economic shocks in East Asia and Latin America certainly contributed to a global sense of urgency to reform inefficient and bloated bureaucracies and to establish smaller governments with greater accountability.<sup>10</sup>

Yet, it would be too easy to blame ideology and economic crisis for the recent surge in attempts to reform health care systems by exposing public services

to competitive market forces, downsizing the public sector, and increasing private sector participation.<sup>11</sup>

In reality, the welfare-state approach failed to address many of the health needs of populations across the world.<sup>12</sup> Hence, the dilemma of policymakers worldwide: although state involvement in the health sector is clearly needed, it is typically beset by public sector production failure.<sup>13</sup>

### **Toward a New Stewardship Role of the State ...**

Today, governments everywhere are reassessing when, where, how, and how much to intervene or whether to leave things to the market forces of patients' demand.

The growing consensus is that to address this problem requires a better match between the roles of the state and the private sector, and their respective capabilities—getting the fundamentals right. In most countries, this means rebalancing an already complex mix of public and private roles in the health sector.<sup>14</sup>

To improve efficiency or equity, governments can choose from an extensive range of actions—from least to most intrusive. These include:

- providing information to encourage behavioral changes needed to improve health outcomes
- developing and enforcing policies and regulations to influence public and private sector activities
- issuing mandates or purchasing services from public and private providers
- providing subsidies to pay for services directly or indirectly
- producing (in-house) preventive and curative services.

In many countries, for reasons of both ideological views and weak public capacity to deal with information asymmetry, contracting, and regulatory problems, governments often try to do too much—especially in terms of in-house service delivery—with too few resources and little capability.

Parallel to such public production, the same well-intending governments often fail to:

- develop effective policies and make available information about personal hygiene, healthy

lifestyles, and appropriate use of health care regulate and contract with available private sector providers

- ensure that adequate financing arrangements are available for the whole population
- secure access to public goods with large externalities for the whole population.

The next section will present a discussion of the most significant sources of government production failure to which market-based solutions are being applied and the market imperfections that must be addressed to optimize complementarity between the two sectors.

### **B. THE NATURE OF GOVERNMENT FAILURE**

Many attempts have been made in recent years to reinvigorate the public sector through “best-practice” management techniques. Borrowed from the private sector and organizational reforms, these tools attempt to replicate the private incentive environment.<sup>15</sup>

These reforms have included efforts to strengthen the managerial expertise of health sector staff, both through training and recruitment policies. Frequently, attempts are also made to use business process reengineering, patient-focused care, and quality-improvement techniques. Such efforts have also included setting up clinical directorates, introducing improved information systems to facilitate effective decision making, and performance benchmarking.<sup>16</sup>

Why has the public sector been so impervious to these types of management and organizational reforms?<sup>17</sup> A review of theories regarding governments' performance of their multiple functions is needed to shed light on the profound nature of the structural problems involved. This review complements the well-developed theories of market failure provided by health economists.<sup>18</sup> Below we explore the problems of poor public accountability, information asymmetry, abuse of monopoly power, failure to provide public goods, and loss in strategic policy formulation that have parallels in market failure.

#### **Problems Relating to Public Accountability**

The first set of problems relates to the difficult task of translating individuals' preferences into public policy and getting that policy implemented. As we know,

all public interventions involve transfers of benefits to some people and costs to others, leaving both winners and losers.<sup>19</sup> Accountability means that government action accords with the will of the people it represents. Yet, since people's values are never perfectly homogeneous in any society, accountability will always be based on some imperfect rule about the aggregation of individual values or respect for minority interests.<sup>20</sup>

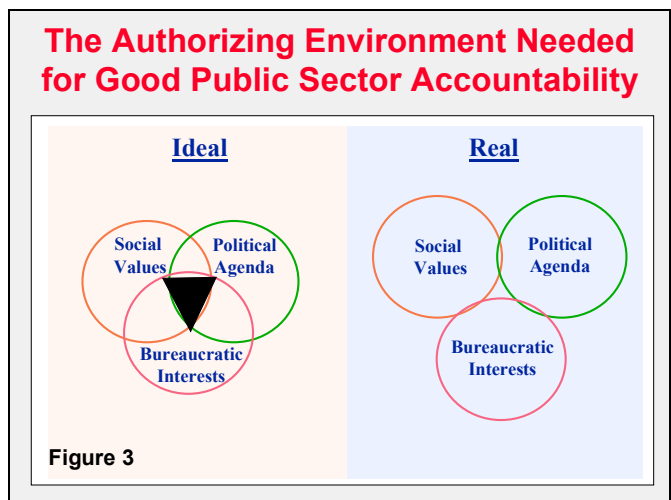
This raises several intractable procedural issues relating to accountability in the electoral process, taxation policies, content of public spending programs, and vested bureaucratic interests.

Ballots are blunt instruments that cannot capture the full range of issues that may be bundled together at election time. The intensity of views on any one issue cannot be reflected. And, election promises are often not kept. So at best, public spending policies are an imprecise reflection of social values.

Majority rule in itself can be a form of tyranny if applied strictly without constraints. Most democratic societies safeguard minority interests to some extent, but even with good intentions there are limits to both practicality and desirability in this respect.

Finally, public servants may have strong conflicts between their own interests and their assigned responsibilities to execute the collective will of the society they represent. And, their political overseers may also have strong vested interests that are different from those of the society that they represent.<sup>21</sup>

In an ideal setting, good public accountability would be secured through a large intersection (*authorizing environment*) between fairly homogeneous social values, a political agenda that reflects such values, and vested bureaucratic interests (Figure 3, left box).<sup>22</sup> For example, there may be general social agreement that the population has to be protected against the financial consequences of illness through some sort of health insurance system. When the policies of the political party in power are consistent with such values and bureaucrats have the capacity to implement them, the intersection will be large.



In the health sector, a further tension exists between the authorizing environment needed for good public accountability and most individuals' desire for some sovereignty over their own health care. This leads to difficult dilemmas during the rationing of care or design of compulsory programs, based on the application of some sort of majority rule that infringes on either perceived minority group rights or individual survival.<sup>23</sup> Normal rational individuals who may share social values about the need to ration health care resources often lose their commitment to such values when confronted by resource constraints in the face of serious illness or death.

### Information Asymmetry in the Public Sector

Information asymmetry can occur in three major ways in the health sector—between patient (public) and health care professional; between patient and administrator or health care system; and between health care professional and administrator or health care system.

Patients know more about their symptoms than doctors but may—unwittingly or deliberately—not articulate this clearly. Doctors know more about the causes, prognosis, and effectiveness of available treatments but may not communicate this clearly to the patient. Or, the patient may not understand the implications of what he/she is being told. For paternalistic reasons, the doctor may deliberately conceal information, based on a judgement that the patient will not be able to cope with the full knowledge of his/or her ailment (e.g., terminal cancer). Through self-selection, these problems are typically worse in the

public sector, which has to deal with large volumes of poorer and less educated patients.

When it comes to interactions between patients (public) and health care administrators, patients may try to avoid being excluded or paying higher health care premiums by choosing to conceal pre-existing conditions. Similarly, there is often have a lack of information and understanding of available public programs. The benefit of gathering useful data about such programs is usually undervalued compared with its cost. Some of these programs may be too complex to fully understand even if information were available. Frequently, the lack of transparency in the rationing of scarce resources is deliberate.

Finally, some serious information asymmetries exist between health care providers and the administrators for whom they work (or between administrators and owners). Health care providers—as advocates for patients—have a much better understanding of legitimate needs or demands. Administrators have a much better understanding about supply and cost of available resources but know little about a selected intervention’s appropriateness or effectiveness. The doctor’s well-know information advantage over the patient is not solved by the existence of a public employer or administrator who knows even less about interactions between patients and providers.

#### *Associated Higher Transaction Costs*

Such information asymmetries add to agency costs in terms of structuring, monitoring, and bonding contracts among agents and principals with conflicting interests.<sup>24</sup> Private firms, concerned about profits, have a strong incentive to limit agency costs related to information asymmetry.<sup>25</sup> Public agencies that are not held to a clear “bottom line” due to unspecified social functions and many complex sources of subsidies do not receive clear signals about the agency cost of such information asymmetry.

Not surprisingly, many public health care facilities in low- and middle-income countries do not keep detailed patient records, do not know through-put statistics, and do not know the unit costs of the procedures they are using or illnesses they treat. Hospitals are often not doing what policymakers or administrators would like, or what they think they should be doing. And, doctors working in such public

hospitals maintain an information advantage that gives them a great deal of latitude to pursue their own interests. Paradoxically, since public systems often give their beneficiaries less leverage than private systems give their clients, patients may be less able to use the information they *do* possess to influence their own treatment.

#### *Potential for Corruption*

Worse than this “ignorance by default,” due to information asymmetry, are the **information** problems deliberately engineered by politicians, bureaucrats, organizations, and health care providers entrusted with public accountability.

Although deliberate deception and fiscal fraud is usually sanctioned severely, it is much harder to hold the public sector accountable for petty abuses, avoidance, and obfuscation. Such deception may take the form of hidden costs, subsidies, cost shifting, or inflation. Or it may occur as an amplification of benefits, exaggeration of the consequences of alternatives, or claiming credit for activities that originate elsewhere.

Given the complex nature of health care, it is not hard to imagine the considerable scope for misleading or defrauding patients and the public in the health sector.

#### **Abuses of Public Monopoly Power**

Monopoly power occurs for four reasons when the public sector gets involved in producing health services. This may be due to: (a) legal restrictions on competition; (b) access to subsidized capital and revenues, creating an uneven “playing field”; (c) below-cost distribution of goods and services to achieve equity goals; or (d) production of public goods or goods where markets are not viable.

When—in addition to the above accountability and information problems—the public sector enjoys monopoly power, people who work for it are given wide scope for abusing this power through the extraction of rents, internal distribution of “slack” to employees, and lowering of quality.

Public monopolies exhibit the usual negative features. First, monopoly suppliers often reduce output and quality, while raising prices. The excess in prices over and above what the market would normally bear—

*rents*—leads to allocative inefficiency or a net deadweight welfare loss to consumers who have to forgo the consumption of other goods.

A manifestation of such rents is the informal user charges that are commonly levied on patients and their families in public health facilities. In many countries, these rents are not limited to doctors' accepting bribes or peddling influence (allowing privileged patients to circumvent the usual rules on resource allocation, to receive preferential treatment, and to cut waiting time). It also includes charges levied by other salaried workers for items ranging from toilet paper and clean linen to food, drugs, and medical supplies.

In a recent study on corruption around the world, such abuses in publicly run health services ranked number one in terms of the burden placed on households.<sup>26</sup> Patients who can afford to pay formal charges in the private sector often prefer it to paying such rents in the public sector. Taxpayers charged twice for low-quality services and such abuses have little recourse but the blunt and often ineffective instrument of voting power.

Second, monopoly suppliers have strong incentives to lower expenditures through decreased output when staff members benefit from the financial residuals. Although public organizations cannot legally distribute such residuals outside the organization to shareholders, they can be internally consumed in several ways. First, executives often receive generous social benefits and travel allowances (perks). Second, time-keeping is often not enforced rigorously (doctors often work short hours in public institutions). Third, some of the residual may be used to pursue personal agendas (discretionary spending on special projects and research).

### **Failure of Critical Policy Formulation**

The most frequently cited reason for greater government involvement in the health sector is that, when left to competitive forces and prices alone, in several other critical areas the market does not lead to welfare-enhancing production and allocation of a number of health care goods and services. These include:

- public goods (policymaking and information)
- goods with large externalities (disease prevention)

- goods with intractable market failure (insurance).

It is therefore surprising that governments in the health sector often neglect the exact same three areas while they are busy producing curative services that the private sector could easily provide. Furthermore, when most public funds are spent on poorly targeted public production, few or no resources are left for strategic purchasing of services for the poor from nongovernmental providers.

The next section presents a discussion of some of the key theoretical underpinnings for a new approach to optimize complementarity between the public and private sector.

### **C. THEORETICAL UNDERPINNINGS**

The current trend worldwide is to use three types of approaches to address the public sector failures in service delivery described above in descending order of importance. They include increased:<sup>27</sup>

- exit possibilities (market consumer choice)
- voice (client participation)
- loyalty (hierarchical sense of responsibility).

When possible, one would always use exit, unless forced to use the weaker variants because the goods and services involved are not “marketable.”

We will focus mainly on the first option—the exit option. This approach relies on greater private sector participation, allowing clients and patients a choice or alternative to publicly provided services. Such exit options can be implemented in parallel with other public sector management reforms that increase voice and loyalty.

#### **From Neoclassical Economics ...**

One of the central tenets of neoclassical economics is that, in an optimally functioning market, competitive forces will lead to a more efficient allocation of resources—*Pareto-optimal* competitive equilibrium—than nonmarket solutions.

According to the neoclassical model, when there are many firms and consumers—and prices are allowed to respond to the forces of supply and demand—competition will result in an equilibrium situation where it is impossible to make someone better off without

making someone else worse off. This will result in a welfare-maximizing situation.

The perfectly competitive *Walrasian* model, as it is sometimes called, requires a number of assumptions to be met. These include:

- The goods involved behave like private goods (i.e., rivalry, excludability, and rejectability (Box 1).
- Rights can be perfectly delineated.
- Transaction costs are zero.

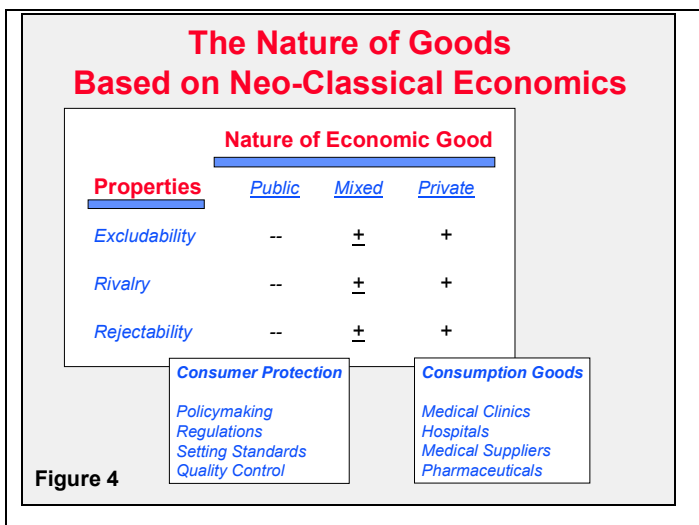
According to neoclassical theory, a breakdown occurs in both efficiency and equity when public goods or services with significant externalities are allocated through competitive markets. Likewise, as described earlier, significant problems occur in efficiency and equity when private goods are produced or provided by a public sector monopoly.

Unfortunately, most health care goods and services do not behave like perfect private or public goods. Many are not perfectly excludable but are associated with complex externalities. Rights are often difficult to delineate, leaving residual claimants. And transaction costs are often high. Therefore, though in a Pareto-optimal state, it would be impossible to make someone better off without making someone else worse off, few situations meet such criteria in the health sector.

On one hand, although many public health activities (e.g., sanitation services, control and prevention of communicable diseases, and health promotion) generate significant externalities, they are not pure public goods. All have some element of excludability, rejectability, and rivalry. For example, a vaccine given to one patient cannot simultaneously be consumed by other patients. At will, patients can choose not to be vaccinated. And, vaccination programs can, in principle, compete with each other for market share.

**Box 1. Private, Mixed, and Public Goods**

The neoclassical model classifies goods and service as *private*, *mixed*, or *public*. Private goods exhibit excludability (consumption by one individual prevents consumption by another—no positive or negative externalities); rivalry (there is competition among goods based on price); and rejectability (individuals can choose to forgo consumption). True public goods have significant elements of nonexcludability, nonrivalry, and nonrejectability. Mixed goods have some but not all of the characteristics of private goods (see Figure 4).



Likewise, even expensive diagnostic and therapeutic care—though often provided in publicly owned inpatient facilities at highly subsidized rates—is really private goods and hence marketable. The same is true for ambulatory and community-based care. Even when governments try to fully control the market for such services, preventing their sale in the informal economy is often difficult.

Therefore, although neoclassical theory is often invoked by mainstream economists to justify public and private roles in the health sector, consumption characteristics alone almost never indicate anything about the specific production processes needed to secure technical efficiency and equity. Neoclassical theory contributes little to the understanding of optimal organizational arrangements for service production. It is essentially “institution free.”<sup>28</sup> Other theories are needed to fill this vacuum in understanding production characteristics.

**...to the Economics of Organizations**

Recently, much progress has been made in identifying the key factors causing wide variations in organizations’ performance. The developments most relevant for understanding the advantages and disadvantages of different arrangements for service delivery come from *principal-agent theory*, *transaction cost economics*, *property rights*, and *public choice theory*. These fields are often grouped together under the title “institutional economics.” Institutional economics directly addresses the issue of how best to structure organizations that consist of individuals pursuing multiple and often conflicting interests.<sup>29</sup>

## *Agency Theory*

This framework highlights that social and political objectives may be more readily achieved through a series of explicit and transparent “contracts” for labor/services between an “agent” that undertakes to perform various tasks in an acceptable way on behalf of a “principal” in exchange for a mutually agreed award. Usually, the principal needs the agent’s efforts and expertise but has only limited ability to monitor the agent’s actions or evaluate whether the final outcome is satisfactory.

The agency literature surveys the range of contracts (e.g., payment and monitoring arrangements) observed in the economy as attempts to align incentives and reward cooperation between self-interested but interdependent individuals.<sup>30</sup> Several studies have generalized the agency insight from the employment context to the full range of relationships that make up the firm—now conceptualized as a nexus of many contracts.<sup>31</sup> The need for incentive alignment is pervasive in the health sector: relations between patient and physician or governments and contracting agencies are classical examples of principal-agent structure.

## *Transaction Cost Economics*

Transaction cost economics emphasizes the limitations of contracts and the need for flexible means of coordinating activities. Principals and agents are both opportunistic. Agents will seek to minimize the aggregate production and transaction costs and maximize the benefits (unless closely monitored, agents might be unreliable, engaging in behavior such as rent seeking, cheating, breach of contract, incomplete disclosure). Principals will try to maximize their benefit to the extent that the relationship could become unviable for the agent.

The extent of such opportunism varies drastically from country to country and from one cultural setting to another. In some settings, such as monopolistic national health services, opportunism may be less apparent than in other settings where providers are more accustomed to competing with each other. Although opportunism may appear to be greater in countries such as Chile, India, and the United States, there is good evidence that principal-agent relationships within national health services such as Costa Rica, New

Zealand, Scandinavia, Sri Lanka, and the United Kingdom are also vulnerable to opportunistic behavior.

This theory sheds most light on firm boundaries and the conditions under which activities are best arranged within a hierarchy instead of through market interactions with suppliers or other contractors. More generally, vertically integrated organizations, simple “spot” contracts, franchises, or joint ventures are interpreted as discrete structural alternatives—each offering different advantages and disadvantages for effective governance.<sup>32</sup> Governance arrangements are evaluated by comparing the patterns of costs generated for planning, adapting, and monitoring production and exchange.<sup>33</sup>

Unlike public organizations, private firms have the flexibility (indeed the requirement) to adjust their governance structure to changes in the market environment—making them fruitful sources of “better practices” for governance arrangements. Public agencies that have tried to adjust public organizations to changes in market environment (e.g., formation of NHS Trusts in the United Kingdom, establishment of the Hospital Authority in Hong Kong, and corporatization of publicly owned hospitals in New Zealand) have often run into problems with the underlying structure of incentives and its sustainability. Major policy reversals occurred recently in both the United Kingdom and New Zealand, adding weight to the argument of some critics of the original reforms that they would have been better off to privatize instead of settling for the imperfect middle ground of public sector corporatization.

For example, vertically integrated (within firm) organizations arise as a response to problems with market contracting. The firm substitutes low-powered incentives, like salaried employment, for the markets’ high-powered incentives of profit and loss. Vertical integration permits the details of future relations between suppliers (including employees), producers, and distributors to remain unspecified; differences can be adjudicated as events unfold. Vertical integration (or unified ownership) pools the risks and rewards of the organization’s activities and can facilitate the sharing of information, the pursuit of innovation, and a culture of cooperation.

### **Box 2: Influence Activities**

An important issue related to moral hazard and the structure of organizations is influence activities and the associated costs, known

as *influence costs*.<sup>34</sup> analysis has shed much light on the propensity of publicly owned service delivery organizations to capture inordinate portions of the sector budget as well as on their ability to influence sector policy to their benefit—often at the expense of the public interest.

In the health sector, provider organizations expend effort to affect decisions regarding the distribution of resources or other benefits among providers to their benefit. These *influence activities* occur in all organizations, but countervailing forces are particularly weak in public service delivery structures—and influence costs are one of the most important costs of centralized control. Evidence of influence activities is seen in public utilities where monopolies are often maintained to protect low productivity of state-owned enterprises from competition from more efficient producers. In the health sector, the tendency to allocate resources to tertiary and curative care at the expense of primary, preventative, and public health is evidence of similar capture.

The cost of these activities includes both the losses associated with poor resource-allocation decisions as well as the loss associated with efforts to capture rents. These costs can be reduced when no decisionmaker has the authority to make decisions that service providers can easily influence. This condition can sometimes be brought about by creating legal or other boundaries between the policymaker, the funder, and the service provider unit. Many organizational reforms have attempted to diminish these activities. Examples include reforms separating the policymaker from the payer from the provider in public service delivery as well as privatization of utilities.

Despite these positive features, vertical integration suffers from characteristic weaknesses as a mechanism of governance. The two most prominent are the weakening of incentives for productivity and the proliferation of influence activities (Box 2). The weak incentives come as individuals capture less and less of the gains of their own efforts as rewards and their losses are spread throughout the organization. Despite its focus on the contracting problems that motivate internal organization, transaction cost economics views vertical integration as the governance mechanism of last resort. Even in the many instances where policy objectives imply that spot market transactions are not desirable, contractual networks, virtual integration, franchising, or concessions will outperform unified ownership arrangements.

### **Box 3: High-Powered Incentives of Ownership**

Suppose a transaction involves several people supplying labor, physical inputs, and so on. If all but one party have contracted to receive fixed amounts, there is only one residual claimant. In that case, maximizing the value received by the residual claimant is the same as maximizing the total value received by all parties. If the residual claimant also has residual control, just by pursuing his own interests and maximizing his own

returns the claimant will be led to make efficient decisions. The combination of residual control and residual claims provides strong incentives and capacity for an owner to maintain and increase an asset's value. Firms often attempt to reproduce these high-powered incentives by allocating residual claims in the form of bonuses or shares to key decisionmakers in their firm.

Misalignment of residual rights and returns causes serious problems. The residual claimant to the returns from a state-owned enterprise is the public purse, but the residual decisionmakers are effectively the enterprise manager, the workers, and the bureaucrats in the supervising ministry. None of these has any great personal stake in the value of the enterprise. The resulting low productivity is well documented. Another example of misalignment comes from the U.S. Savings and Loan (S&L) industry. Those who had the right to control the S&L's investment also had the right to keep any profits earned but were not obligated to make good on losses. That combination of rights and obligations created an incentive for risk taking and fraud that was not effectively countered by other devices during most of the 1980s.<sup>35</sup>

These fields of analysis have led to better understanding of the institutional sources of government failure. The framework has been used to design organizational reforms that seek to allocate to the holders of critical information the authority to make relevant decisions and the financial incentive to do so (in the form of residual claims on the outcome of the decision).

### *Property Rights Theory*

Property rights theory looks at the same incentive issues from a slightly different perspective. Since private ownership appears to have strong positive incentives for efficiency, property rights theorists have attempted to find out why (Box 3). Explanations have focused on two issues: the possession of residual decision rights and the allocation of residual returns.<sup>36</sup> Residual rights of control are the rights to make any decisions regarding an asset's use not explicitly contracted by law or assigned to another by contract. The owner of an asset usually holds these rights although they may be allocated to others.<sup>37</sup>

The notion of ownership as residual control is relatively clear for a simple asset like a car. It gets much more complicated when applied to an organization such as a firm. Large organizations bundle together many assets, and who has which decision rights may be

ambiguous. In addition to residual decision rights, an owner holds the rights to residual revenue flows from his assets. That is, the owner has the right to whatever revenue remains after all funds have been collected, and all debts, expenses, and other contractual obligations have been paid out.

### *Political Choice Theory*

This field focuses on the self-interested behavior of politicians, interest groups, and bureaucrats, and studies its implications for effective government and the size of government. Individuals are viewed as rational utility maximizers. Bureaucrats, attempting to maximize their budgets, will acquire an increasing share of national income. As a result, the state will grow much bigger than necessary to deliver core functions. Powerful interest groups will capture increasing portions of resources. Institutional rigidities develop, reducing economic growth.<sup>38</sup> This analysis has led public choice theorists to support conservative political agendas (minimizing the role of the state).

### **Production Characteristics of Goods and Services ...**

The principles of institutional economics lead to a much more refined and useful understanding of the different kinds of institutional arrangements required for efficient and effective production of goods and services. A model along these lines can be developed, based on two different and often ignored goods characteristics—*contestability and measurability*.<sup>39</sup>

A market can be said to be perfectly contestable if firms can enter it freely (without any resistance from existing firms) and then exit without losing any of their investments, while having equal access to technology (no asset specificity).<sup>40</sup> Contestability allows competition *for* the market to substitute for competition *in* the market.

Contestable goods are characterized by low barriers to entry and exit from the market, whereas non-contestable goods have high barriers such as sunk cost, monopoly market power, geographic advantages, and asset specificity. Investments in specific assets represent a “sunk cost” since its value cannot be recovered elsewhere.<sup>41</sup> Two specific assets that are especially relevant in the health sector are expertise and reputation. Once incumbents have invested in activities that result in expertise or generate trust, they enjoy a significant

barrier to entry for other potential suppliers, thereby lowering the degree of contestability. Opportunism, on the other hand, will lower such trust or barriers to entry. The degree of such opportunism will vary from one country to another and in different cultural settings.

Measurability in the health sector, as in other sectors, is the precision with which inputs, processes, outputs, and outcomes of a good or service can be measured. By definition, it is difficult to measure with precision the output and outcome of health services characterized by a high degree of information asymmetry. Information asymmetry is the extent to which information about the performance of an activity is available to users, beneficiaries, and contracting purchasing agencies (see discussion above under “The Nature of Government Failure”).

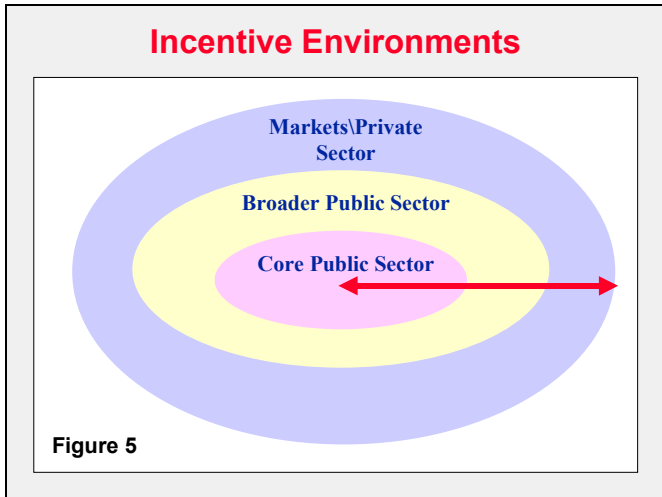
These theoretical underpinnings are used in the following section to understand some recent reforms in the public sector.

### **D. TRENDS IN PUBLIC SECTOR REFORMS**

Rarely does technical or systemic analysis alone influence the extent of public and private involvement in the health sector. In actuality, service delivery arrangements are the product of complex economic, institutional, and political factors.

Extensive reforms of public sector organizations and state-owned enterprises, implemented over the past 15 years, addressed the same problems encountered in delivering public health services. In the realization that these organizational problems were structural in nature, using the analytical tools of organizational economics, these reforms have focused on altering the institutional arrangements for service. These developments shed light on similar problems in delivering public health services.

One way to understand organizational reforms in service delivery is to view the different incentive environments within which government’s tasks can be performed (Figure 5).<sup>42</sup> The civil or core public service lies at the center (usually constitutional control bodies, line ministries), and the activities of the staff are highly determined. Job tenure is also strong. Budgetary units (government departments), autonomous units, corporatized units, and privatized units are four common organizational modalities that straddle these incentive environments in the health sector.<sup>43</sup>



The broader public sector is distinguished by the relative flexibility of the financial management regime and by managerial freedom in recruitment and promotion. This sector may include special purpose agencies, autonomous agencies and, on the outer limits, state-owned enterprises. Beyond the public sector lies the domain of the market and civil society. Services may be delivered by for-profit, nonprofit, or community organizations. The incentives for efficient production are higher moving toward the periphery, where service delivery is often better.

Many reforms throughout the world have sought to move delivery away from the center of the circle to more arm's-length contracts with public and private organizations. However, the nature of the outputs and the existence of mechanisms for public sector management of their delivery constrains moving delivery outward.

Increased autonomy or corporatization—moving from the center of the circle to the outer limits—requires accountability mechanisms not tied to direct control. These controls (e.g., contracts) take considerable capacity to write and enforce, especially for health services where outputs and outcomes are difficult to specify.

How far countries may go in pushing activities to incentive environments in the outer circles depends on the nature of the outputs (the services involved) and their capacity to create accountability for public objectives through indirect mechanisms such as regulation and contracting.

**E. APPLICATION TO HEALTH SECTOR**

Looking at the health sector across the world, all health care goods and services can be categorized on a continuum from high-contestability and high-measurability services to low-contestability and low-measurability services, and significant information asymmetry.

Factor markets and product markets will be discussed separately, since each has unique characteristics. Although the following discussion refers mainly to curative and public health services, the analysis could be extended to some of the broader intersectoral determinants of good health such as water, sanitation, education, healthy lifestyle policies, and good nutrition.

**Production Characteristics of Factor Markets**

For the production of inputs, this contestability and measurability matrix would look as follows (Figure 6).

**Production Characteristics of Inputs  
(Factor Markets)**

**Figure 6**

	High Contestability	Medium Contestability	Low Contestability
High Measurability	<b>Type I</b> • Production of Consumables • Retail of • Drugs & Equipment • Other Consumables • Unskilled Labor	<b>Type II</b> • Production of Equipment • Wholesale • Drugs & Equipment • Other Consumables • Small Capital Stock	<b>Type III</b> • Production • Pharmaceuticals • High Technology • Large Capital Stock
Medium Measurability	<b>Type IV</b> •	<b>Type V</b> • Basic Training • Skilled Labor	<b>Type VI</b> • Research • Knowledge • Higher Education • High Skilled Labor
Low Measurability	<b>Type VII</b> •	<b>Type VIII</b> •	<b>Type IX</b> •

The production of consumable items and the retail of drugs, medical supplies, and other consumables would be the best example of highly contestable goods where outputs are also easy to measure (Type I). Many companies usually jostle for a share of the market, and barriers to entry are few (the initial investment capital is modest and there are few requirements for specialized licensing or skills). Unskilled labor also belongs in this category.

As we move across the first row, a number of factors begin to contribute to raising the barriers to

entry, thereby reducing the contestability of the goods or services in question (Type I). Investment cost (sunk cost) and increasing technical specifications create moderate barriers to entry in the manufacture of specialized equipment and supplies. Wholesale trade in drugs, medical supplies, and medical equipment has some entry barriers because of the larger investment requirements and more limited supply and distribution chains. The specialization and licensing of pharmacists contribute to these entry barriers. In the case of small capital stock (e.g., clinics and diagnostic centers), entry barriers are created mainly through certification and licensing.

Finally, as we move across to Type III activities, entry barriers are much higher, as in the manufacture of pharmaceuticals and high-technology medical equipment, due to large up-front investment costs that cannot be recovered later during sale of the assets (sunk-costs). These production activities are also associated with costly and long lead-time for research, development, and registration of new products. Other barriers to entry under this category include product differentiation (specialized medical equipment) and copyright protection (brand-name drugs). Furthermore, because of the benefits conferred through economies of scope and scale, over time a significant global concentration of pharmaceutical and high-technology industries has occurred, giving them considerable monopoly power.

For all the activities in the first row (Type I through III), measurability of outputs remains high. There is little information asymmetry.

As we move to the second row, measurement of the outputs and outcomes become more problematic. Outputs and outcomes can be measured, but it is more difficult than in the case of activities in the first row.

Various barriers to entry reduce contestability. Training is almost always associated with special licensing and long lead times (Type V). The specialized labor market is usually associated with many professional barriers as well as subsequent restrictions in scope of practice and labor mobility. Contestability is even lower in the Type-VI—(why parens here) category. Most research and other knowledge-generating activities would fall under this category. So does the training of highly specialized staff in universities and other higher education centers.

There are no good examples of inputs for the health sector that would fit into the last row, with significant information asymmetry in addition to measurement problems.

### **Production Characteristics of Product Markets**

Interventions and services can also be categorized along a similar continuum from high contestability and high measurability through to interventions and other outputs with low contestability, low measurability, and significant information asymmetry (Figure 7). Whereas reduced contestability due to market concentration is one of the main problems encountered in factor markets (production of inputs), a key problem with interventions and other outputs (product markets) has to do with difficulties in specifying and measuring outputs and outcomes.

## Production Characteristics of Outputs (Product Markets)

Figure 7

	High Contestability	Medium Contestability	Low Contestability
High Measurability	Type I •	Type II •	Type III •
Medium Measurability	Type IV • Non Clinical Activities • Management Support • Laundry & Catering • Routine Diagnostics	Type V • Clinical Interventions • High Tech Diagnostics	Type VI •
Low Measurability	Type VII • Ambulatory Care • Medical • Nursing • Dental	Type VIII • Public Health Interventions • Intersectoral Action • In-Patient Care	Type IX • Policymaking • Monitoring/Evaluation

As we move to the second row (Type IV to Type VI), measurement of the outputs and outcomes becomes more problematic. Although routine diagnostics such as laboratory tests may be highly contestable (many players in a competitive market with few barriers to entry), monitoring their performance in terms of effectiveness and quality of the activities undertaken is much harder (Type IV). The same is true for various nonclinical hospital activities.

As we move across to the Type V category, contestability is reduced by various barriers to entry. High-tech diagnostics usually requires specialization, licensing, and large sunk costs, giving established players a marked advantage over new entrants. A further barrier to entry for these activities would be government policies that control or restrict the introduction of some new technologies (CAT or NMR scanners). Clinical interventions are usually outsourced only to certified providers. In each of these cases, outputs and outcomes can be measured, but it is more difficult that in the case of activities in the first row.

In addition to difficulties in measuring output and outcomes, most clinical interventions are characterized by an additional constraint of information asymmetry. At times, information may be readily apparent to patients (e.g., the quality of “hotel services” such as courtesy of clinical staff, the length of waiting periods, the cleanliness of linens, the palatability of food, and privacy. Without survey techniques, however, such information may not be readily available to the contracting policymakers or administrative staff.

For these reasons, ambulatory clinical care

would fall under the Type VI category (relatively low barriers to entry other than professional qualifications/certification of staff) but high information asymmetry and difficulties measuring outputs and outcomes. As we move across the third row, contestability diminishes due to specialization and cost, in addition to measurement problems. For these reasons, public health interventions, intersectoral action programs, and inpatient clinical care belong to Type VII activities.

This leaves a few clear-cut activities such as policymaking, monitoring, and evaluation under the Type IX category. The contestability and measurability of these activities is extremely low. These activities are therefore usually retained as a core part of an integrated bureaucracy.

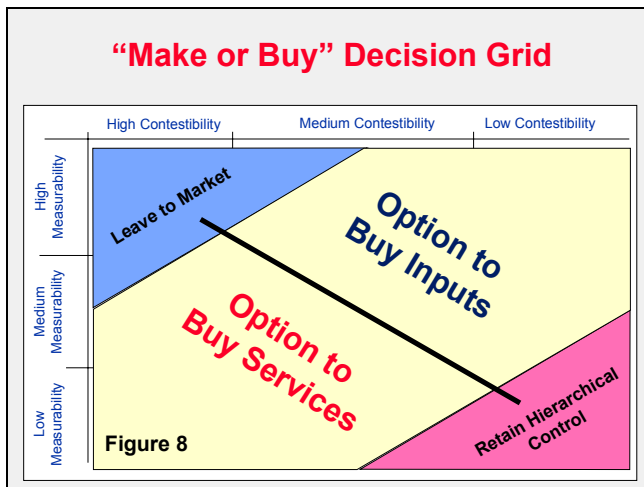
### F. “MAKE OR BUY” DECISION GRID

#### Set Priorities First ...

In many countries “make or buy” decision are made before policymakers and providers have gone through an explicit priority-setting process. Priorities specified should include the range of interventions to finance through public resources (including preventive services) and should ensure that public subsidies are appropriately targeted (e.g., to the poor and other vulnerable groups).<sup>44</sup> Countries often rush into “make or buy” decisions before setting priorities for needed and affordable interventions. Such prioritization is complicated by the fact that the cost of treating different illnesses varies greatly and often bears little relation to the effectiveness of available interventions.<sup>45</sup> Furthermore, for a whole range of activities, information disclosure and coordination through a strong stewardship function may be sufficient.

#### ... Then Decide Who Can Produce What

Based on the above discussion, it is now easy to map the goods and services that can be bought, those where coordination is enough, and those that are better produced in-house by the public sector itself (Figure 8). The size of the “make” in-house production triangle will depend largely on the effectiveness of policy instruments to deal with contestability and measurability problems. See section G for discussion..



### ... Finally Decide From Whom to Buy and How

Once “make or buy” options have been settled, the next questions relate to: (b) whom to buy from; and (c) how to structure the purchase.

#### *Whom to buy from*

- Consider all possible producers (public, nongovernmental and private-for-profit; domestic, and international).
- Base purchase decision on best product at the lowest price responsive to specific needs—type of good, price, quantity, after acquisition support, timeliness, and so forth (consider international competitive bidding when possible).
- If there is currently no market, consider stimulating demand rather than in-house production.
- If contestability is low and there is no competitive market, consider using benchmark purchasing (based on estimated reference costs) so that suppliers have to compete *for* rather than *in* the market.
- If there is a market, but it is dysfunctional, consider improving its function through appropriate incentives (strategic subsidies) or regulations (antitrust).

#### *And how to buy*

- Choose the contractual arrangement most suitable for a given purchase (spot market for unpredictable items, medium-term supply contract for predictable items, franchise arrangements for standardized needs at multiple locations, and relational contract for difficult-to-monitor purchases).<sup>46</sup>

Once a buying decision has been made, all potential producers must be treated alike by creating a level playing field. This includes ensuring that there are no hidden competitive advantages such as tax concessions or access to subsidized capital. And it means ensuring that no unfair competitive advantage is given to any producer through privileged access to information.

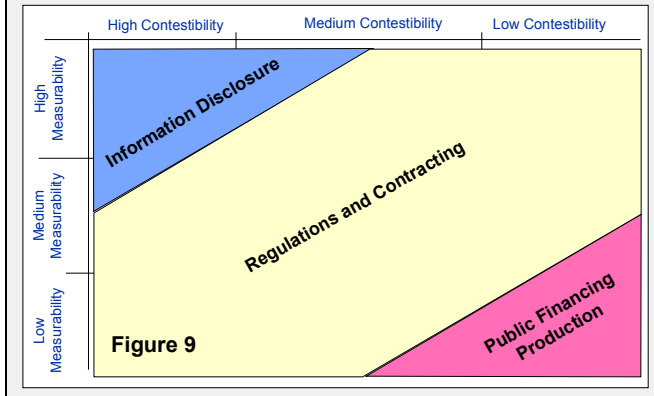
### G. POLICY LEVERS AVAILABLE TO GOVERNMENTS

From the previous discussion, we can see that most goods and services have some degree of market imperfection in terms of reduced contestability and measurability. Governments have at their disposal a variety of instruments that they can use to address these problems. A few of these instruments—from least to most intrusive—include requiring information disclosure, introducing regulations, contracting for services, providing subsidies or direct financing, and beginning public production. In this section we discuss these instruments as they relate to “make or buy” decisions.

#### Standard Policy Instruments

*Factor markets.* For some inputs—the production of consumables, unskilled labor, and the retail of drugs, medical equipment, and consumables—there are few serious market imperfections such as reduced contestability and low measurability (Figure 9, upper left corner of matrix). With minimal government intervention such as good information disclosure and some quality or safety standards, competitive markets are best at producing these inputs. Public production of these inputs usually leads to low quality, lack of innovation, and inefficient production modalities.

## Policies to Deal with Reduced Contestability and Measurability



The other extreme—training very specialized labor and generating knowledge about rare health conditions and their treatment—is characterized by considerable market imperfections due to reduced contestability and low measurability. A mix of strong regulation and in-house production is often needed to ensure adequate generation of these inputs.

Most other inputs can be bought. However, markets often give the wrong signal about the level (surpluses and shortages), mix, and distribution of these inputs. This is especially true of human resources and the production of pharmaceuticals and medical equipment with a long development or training phase. Skilled use of regulations and contracting mechanisms is therefore needed when purchasing inputs that have moderate contestability and measurability problems.

Large producers may try to severely reduce contestability by erecting strong barriers to entry through protective policies (patents and licensing requirements), benchmarking (manufacturing standards), large sunk cost requirements, collusion, and a high degree of specialization (R&D). For these inputs, stronger policy measures may be needed such as monopsony purchasing power and long term contracts.

Despite this complex landscape in goods characteristics, in many areas of reduced contestability and measurability, governments could achieve most equity, efficiency, and quality objectives through regulations and contracting.<sup>47</sup>

*Product markets.* As in the case of inputs, the production of interventions and other outputs can be

“contracted out” (purchased) and do not in principle have to be produced in-house.

In practice, decisions about which interventions to make in-house and which to contract out are complicated by a number of factors. First, for some outputs (e.g., clinical interventions) what is to be delivered is much harder to specify than the inputs. This makes it difficult to manage the resulting contracts and prevent opportunistic behavior by providers (private health insurance is especially vulnerable to opportunistic behavior). Second, contestability is often reduced for the reasons described earlier in our discussion on inputs. Finally, complex health problems often require strategic coordination among different interventions and other outputs (integrated care, continuity of care, appropriate and timely referrals, and the like).

In the case of outputs, policymakers need to examine two critical questions in addition to the degree of contestability and measurability before arriving at good “make or buy” decisions. Is a strategic coordinated response needed? To what degree do the goods and services benefit from ongoing innovation and adaptability?

For example, nonclinical activities such as custodial services, catering, laundry, and management do not require special strategic coordination. They can usually be “unbundled” and “contracted out” as a standard service to firms that specialize in these activities without too much customization. In contrast, clinical and public health interventions often do need to be coordinated and tailored to the individuals and populations receiving them and the organizations providing them. Experience has shown that “unbundling” these activities often leads to many problems such as cost shifting, discontinuity of care, and poor quality.<sup>48</sup>

### Other Often Forgotten Policy Levers

The contestability and measurability of goods and services is not static but influenced by elements of the systemic environment. Government policies directly influence this environment and the “nature of the good,” yielding alternative levers to take them closer to (or farther away from) the ability to use the indirect tools of contracting and regulation. These alternative levers include:

- *Governance*: relationship between owner (governments) and health care organizations
- *Market environment*: competition in or for goods and services markets
- *Purchasing mechanisms*: funding or payments arrangements for the goods or services.

These three factors exert a powerful influence on the “nature of the goods” and hence on the ability to ensure delivery through indirect mechanisms. In the next three sections, we will see how these factors combine to determine the level of contestability in the market or measurability of a good. This will include a discussion of which instruments are effective in dealing with the related market and government failures.

### Governance and Internal Incentive Regime

Changes made in *governance*—the relationship between government and organizations— influence the goods characteristics of the health care goods and services in question. This relationship can be modified substantially in five different dimensions: (a) the *decision rights* given managers; (b) the *residual claimant* status; (c) the degree of *market exposure*; (d) *accountability arrangements*; and (e) adequacy of *subsidies* to cover social functions.<sup>49</sup>

Contestability may be enhanced by:

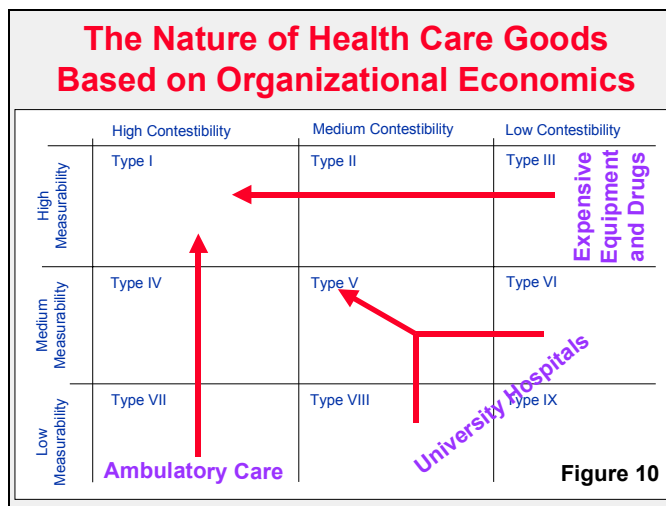
- unbundling large bureaucratic structures (modification in governance)
- outsourcing other functions to specialized providers (modification in payment system)
- leveling the playing field by exposing all the actors to the same potential benefits and losses due to market exposure (modification payment system)
- decreasing barriers to entry due to political interference or unwarranted trust in public production (modification in market structure)
- explicitly separating contestable commercial functions and noncommercial social objectives (modification in governance and stewardship).

Measurability may be enhanced by.

- relying on quantifiable results (output or outcome measures) for accountability and performance targets rather than process (inputs and bureaucratic procedures) (modification in governance and payment system)

- shifting from difficult-to-define, long-term relationships (employment or service arrangements) to shorter term, more specific contractual arrangements (modification in payment system)
- using quantifiable monetary incentives instead of more difficult to track nonmonetary incentive payments such as ethics, ethos, and status (modification in payment system)
- tightening reporting, monitoring, and accountability mechanisms (modification in governance and payment system).

For example, by removing restrictive government monopolies from vaccination services (governance/market), such programs could be shifted into a Type II or even Type I position. It is easy to measure the number of children vaccinated, who contracts a given disease, and entry barriers for firms that want to provide vaccination services on behalf of the government. Similar action applied to other services could shift many away from the lower right corner of the grid toward the upper left corner (Figure 10).



Likewise, tertiary and quaternary care provided in university hospitals could be shifted from a low-contestability/measurability grid to a medium-contestability/measurability position through better information on outcome, policies that favor clearly defined contracts, performance benchmarks, and a tightening of reporting, monitoring, and accountability mechanisms. The same would be true for public health services and activities such as vaccination that are often part of the responsibilities of ambulatory care providers.

Several factors may also alter the goods characteristics of pharmaceuticals, medical equipment,

and consumable supplies. As recently as 10 years ago development costs, patent protection, and a small market share may have made highly specialized medical equipment or drugs (Type III goods) very expensive. Today, they may behave like ordinary goods (Type II or I). Examples include the quick production of generic drugs by many companies once patent protection expires or the rapid increase in use of sigmoidoscopes and transcutaneous surgical instruments once the technology was no longer new and prices dropped.

This shift in goods characteristics is not a one-way street. The goods properties can also become less contestable and more difficult to measure. Organizational reforms do not always lead to increased decision rights, residual claimant status, market exposure, accountability arrangements, and explicit subsidies to cover social functions. In fact, during the past 50 years, many national health systems deliberately shifted goods and services in the opposite direction by nationalizing ownership and production.

And market imperfections may contribute to entry barriers instead of lowering them. Doctors, dentists, and pharmacists can and do collude to restrict entry by potential competitors. Hospitals have a natural monopoly for their services for patients living nearby and can create monopoly power through relations with other hospitals and referring doctors. Medical equipment distributors with licensing agreements for the top international companies can easily monopolize a domestic market. Pharmaceutical retailers can control their mark-up by forming professional cartels. The public and nongovernmental sectors have a competitive advantage over the private sector due to their access to subsidized or free capital from domestic and foreign donors.

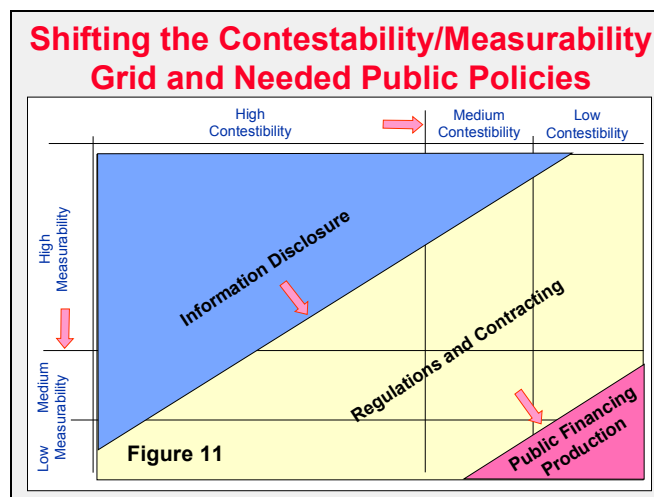
### Market Environment

A central argument in favor of exposing providers to market forces is that, in a functioning market, competitive forces will lead to a more efficient allocation of resources than a command economy or nonmarket solutions. The structure of the market to which organizations are exposed, therefore, has a critical influence on their behavior. It may directly determine what strategies make sense to generate more revenue.

Policies that influence the competitive environment through regulations or contracting can significantly alter the contestability of health care goods

and services. Similarly, information asymmetry can be reduced by policies that increase the availability of good information on health services, enhance health care providers' institutional capacity to deal with such information, and improve patients' understanding about health problems.

Such policies not only address some of the underlying contestability and measurability problems, but they also shift both the contestability/measurability grid and the boundaries of needed government intervention to ensure favorable outcomes (Figure 11).



Conversely, in a less competitive environment with weak policies and data to overcome information asymmetry, the grid for services that fall into the upper left corner (Type I, II, and IV) may contract, with the grid in the lower right corner (VI, VIII, and IX) expanding.

### Market Imperfections in Service Delivery

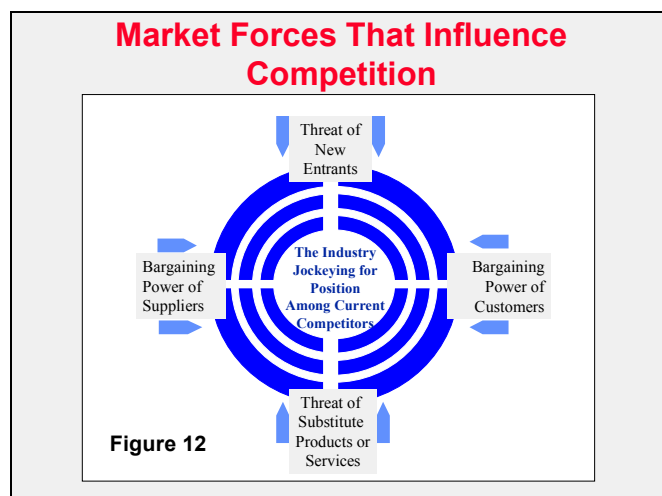
There are two related problems in the market structure of service delivery in most segments of the health sector. First, little or no competition may emerge—reducing the pressures on the provider to deliver “value for money” to maximize profits. Alternatively (or in addition), competition may emerge, but it may be dysfunctional. Both cases are discussed in this section.

Some health services, especially tertiary and quaternary, exhibit scale economies in production. This relieves incumbent hospitals from pressure from new entrants. Geographic monopoly over certain services may leave buyers very little leverage to negotiate with

service providers. There are many examples of strong collusion among medical doctors that creates a virtual monopoly, thereby shifting the grid for ambulatory medical care toward the left—and strengthening the need for direct provision or other policy intervention. Public monopolies and policies that prevent public funds from being used to contract services from the private sector have the same negative effect on contestability.

Even for services where monopoly power is not an issue, providers may still capture market share or maximize profits through various forms of distortionary behavior (Figure 12).

In a competitive market, firms seek to maximize their profits—and by using *any method that makes sense in that environment*. In a healthy market environment, they will try to capture market share from their competitors by better pleasing customers, maximize profits by reducing costs through efficiency gains, and expand their product lines through imitation or innovation. Wherever possible, however, they will seek to exploit or construct advantages. Where this is possible, the pressures for efficiency and quality generated by the market may be weak.



Such distortionary features of health service markets often enable providers to: (a) counter the bargaining power of suppliers, patients, or purchasers; (b) ward off threats posed by new entrants and imitation products; and (c) control a large share of the relevant market.

Information asymmetry in the health sector exacerbates these problems. For example, medical treatment is largely a “bundled” good where the seller

(doctor) guides patients’ consumption decisions—which hospital to go to for surgery, which lab to use for diagnostic services, and so on. Thus, providers can parley their information advantage into control over a rigid and lucrative referral chain. Doctors may “forward integrate” into diagnostic labs or pharmacies and steer their patients toward consumption where they have a financial stake. Hospitals may “backward integrate” by creating strong links with doctors, thereby cornering part of the market where they experience little or no competitive pressure. Medical professionals are frequently able to create cartels, limiting competitive pressures that strengthen the influence of patients and purchasers.

Since patients and payers know less than providers about the true value or cost of health services, providers can cream-skim, selecting patients who cost less to treat than other patients. Thus, providers can increase their profits, not by delivering better service to capture market share or cutting costs but by choosing more profitable patients.

Most of these market imperfections in service delivery can be corrected through appropriate regulations and contracting arrangements.

A few examples will illustrate this point. Equal access to capital and antitrust legislation, limiting the power of professional cartels, can significantly decrease the entry barriers for some segments of the health care market, especially for clinical services that fall in the middle band of the contestability/measurability grid. The same would be true for contracting practices that are open to both public and private providers and which leave open possibilities for choosing alternative providers or exercising “exit” strategies.

In other instances, supplier cartels, combined with low quality-control standards, shift activities such as retail sale and distribution of pharmaceuticals and medical equipment into the lower right corner, even though such activities belong in the upper left area of high contestability and measurability.

#### *Market Imperfections of Private Health Insurance*

Even if private health insurance is contestable, due to severe information asymmetry, such services are often deliberately crowded out for strategic reasons by restrictive policies and public financing. This topic is beyond the scope of discussion in this paper but is

discussed in detail elsewhere and briefly in Box 4.<sup>50</sup>

#### **Box 4. The Intractable Market Imperfections of Private Health Insurance**

Private voluntary health insurance is one area that is particularly prone to market imperfections, many of them related to information asymmetries.

Insurance may succeed in protecting some people against selected risks, but it usually fails to cover everyone who wants to subscribe to insurance plans and often excludes individuals who need health insurance the most or who are at greatest risk of illness. This happens because insurers have a strong incentive to enroll only healthy or low-cost clients (risk selection or cream-skimming). Private insurers also have incentives to exclude costly conditions or to minimize their financial risk by using benefit caps and exclusions. This limits protection against expensive/ catastrophic illnesses.

Because of these factors, individuals who know they are at risk of illness have a strong incentive to conceal their underlying medical condition (adverse selection). Individuals who are—or think they are—healthy will often try to pay as low premiums as possible. This prevents insurers from raising the funds needed to cover the expenses incurred by sicker or riskier members. Worse, the healthy may even deliberately underinsure themselves, in the hope that free or highly subsidized care will be available when they become ill (free-riding). When third-party insurers pay, both patients and providers have less incentive to be concerned about costs, and some may become careless about maintaining good health. This leads not only to more care being used (the reason for insurance), but also to less effective care, or care that would not be needed if people maintained good health (moral hazard).

#### **Purchasing Mechanisms**

Finally, provider payment systems also influence goods properties by interacting with three of the five key elements of the internal incentive regime of health care organizations: distribution of residual claims, market exposure, and provision for social functions. Service providers, in particular, respond differently to alternative funding and payment mechanisms. For example, collective purchasing by a strategic social health insurance fund in Germany sends a different set of signals to providers than regulated competition in the United States, consumer-driven demand through out-of-pocket payments in India, medical savings accounts in Singapore, and monopsonistic purchasing in the United Kingdom.

Although reforms in governance may endow an organization with formal claims to residual revenue in different categories, the structure of the payments system will directly determine whether this claim has any real meaning or incentive effect. If, for example, services must be delivered at prices below cost, there

will be no residual to claim. Thus, the relation of costs to the price-setting and capital-charging formula in the payments system is a critical determinant of the incentives of the model. The crucial factor is whether marginal cost-saving efforts by the provider can generate revenue flows that the provider can keep without deterioration in quality or effectiveness.

When reforms in organizations such as hospitals entail a shift in revenue earning by delivering services “in a market,” what kind of market emerges becomes a crucial issue. Often, government is the largest or only buyer. In this case, the process and terms on which the government purchaser engages the provider may well determine the degree of pressure on the provider to “deliver the goods.”

To gain maximum benefits from reforms that expose the public sector to competition with the private sector, it is crucial that adequate steps are taken to secure competitive neutrality.

Two sets of policies must be built into provider payment systems to achieve competitive neutrality:

- monetization of social functions such as explicit subsidies that cover the cost plus a reasonable margin in delivering services to nonpaying or uninsured patients
- leveling of the playing field through a standardization of the fee structure and cost of capital for both the public and private sector.

#### **H. GETTING FROM HERE TO THERE**

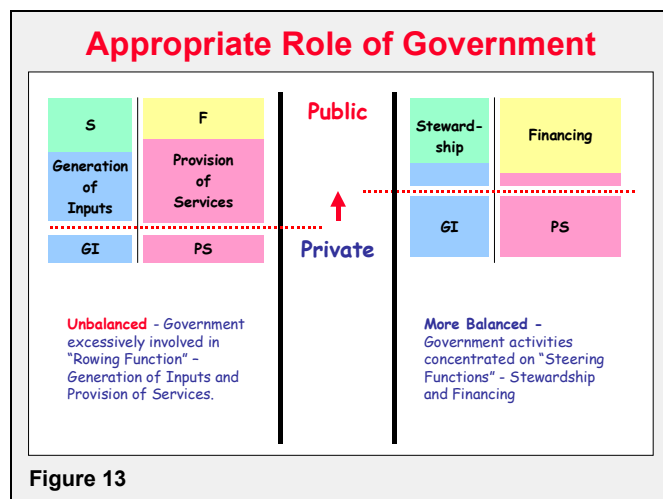
We have presented a strong argument for a continued and even an enhanced role for the state in providing strong sectoral *stewardship* and securing equitable and sustainable financing for the health sector. But it challenges the principles and nature of public intervention pursued by many governments, especially in the area of the public production of health services.

Many countries today have large inefficient public sectors producing goods and services that could be bought from nongovernmental providers. Moving from one system to another will not be easy (Figure 13). It will take time and must be accompanied by capacity building in areas such as contracting, regulation, and coordination of nongovernmental providers.

A three-step process can be used to move gradually from one balance to another in the public-private mix in service delivery. First, when there is already a large private sector, the public sector can begin by recognizing its existence and slowly increase use of these resources through better coordination, contracts, and a positive regulatory environment.

Once some learning has taken place in coordinating and contracting with existing providers, the positive lessons from this experience can be transferred to other priority areas where nongovernmental providers may not yet be active. Finally, in some cases where the public sector is clearly engaged in inefficient activities such as public production of many inputs, these can be converted through outright privatization and subsequently bought from the private sector.<sup>51</sup>

At the same time, the public sector may not be involved in areas of strategic importance such as securing financial protection against the cost of illness and failing to provide critical sectoral oversight in terms of its stewardship function. Parallel to moving out of the area of production of goods and services, a strong argument can be made for a more integrated approach and greater public sector involvement in health care financing, sectoral coordination, regulation, monitoring, and evaluation.



## ENDNOTES

- <sup>1</sup> World Health Organization (WHO), *World Health Report 2000: Health Systems Performance* (Geneva: WHO, 2000).
- <sup>2</sup> D. Black, *An Anthology of False Antitheses* (London: Nuffield Provincial Hospital Trust, 1984). Flexibility and rigidity; access and privacy; animal experiment an animal welfare; medicine and alternative medicine; science and compassion; acute and chronic sector; hospital or community; treatment or prevention; science or compassion; access and privacy.
- <sup>3</sup> Papyri are ancient Egyptian clay tablets. J. K. Mason and R. A. McCall Smith, *Law and Medical Ethics*, 2d ed., (London: Butterworths, 1987), p. 4, quoting A. Castiglioni, *A History of Medicine*, translated and edited by E.B. Krunbhaar, 2d ed. 1947).
- <sup>4</sup> In this famous cuneiform legal code of the first Babylonian Dynasty, has 9 of its 282 statutes relate to the services of healers. Statutes 215–17 and 221–23 deal with laws governing the fees to be received for certain services; Statutes 218–20 deal with penalties to be inflicted on the healer in the case of unsatisfactory therapeutic results and death. Careleton B. Chapman, *Physicians, Law, and Ethics* (New York: New York University Press, 1984), pp. 4–5.
- <sup>5</sup> Control of membership and secrecy, reflected in the *Hippocratic Oath*, was characteristic of all trades. British Medical Association (BMA), *Handbook of Medical Ethics* (London: BMA, 1984), p. 6.
- <sup>6</sup> Today, the United States, Mexico, and Turkey are three exceptions in the Organization for Economic Cooperation and Development (OECD) where universal access has not yet been secured. For a review of the introduction of universality in the OECD, see A.S. Preker, *The Introduction of Universality in Health Care* (London: IHS, 1989).
- <sup>7</sup> For a comprehensive discussion see R.G. Evans, *Strained Mercy* (Toronto: Butterworth, 1984). The classics include: F. Bator, “The Anatomy of Market Failure,” *Quarterly Journal of Economics* 72:3 (1958): 351–79; A.B. Atkinson, and J.E. Stiglitz, *Lectures on Public Economics* (Maidenhead: McGraw-Hill, 1980); and R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory and Practice*, 4th ed. (New York: McGraw-Hill, 1984).
- <sup>8</sup> For a more comprehensive discussion see Barer, L. Morris, Thomas E. Getzen, and Greg L. Stoddart (eds.), *Health, Health Care and Health Economics: Perspectives on Distribution* (Chichester, West Sussex, England: John Wiley & Sons, 1998); and E. van Doorslaer, A. Wagstaff, and F. Rutten (eds.), *Equity in the Finance and Delivery of Health Care: An International Perspective*, (Oxford: Oxford Medical Publications, 1993). The classical reference is K.W. Arrow, “Uncertainty and the Welfare Economics of Medical Care,” *American Economic Review* 53:5 (1963): 940–73.
- <sup>9</sup> For a comprehensive review, see P. Young, *Privatization Around the Globe: Lessons from the Reagan Administration* (Houston: National Center for Policy Analysis, January 1986); and J.S. Vickers and G.K. Yarrow, *Privatization: An Economic Analysis* (Cambridge, Mass.: MIT Press, 1992).
- <sup>10</sup> N. Barr (ed.), *Labor Markets and Social Policy in Central and Eastern Europe* (Oxford: World Bank/Oxford University Press, 1994); and World Bank, “Investing in People and Growth,” *1996 World Development Report: From Plan to Market*, ch. 8 (New York: Oxford University Press, 1996) pp. 123–32
- <sup>11</sup> One of the first proposals for this approach was published by A. Enthoven, “Consumer Choice Health Plan,” *New England Journal of Medicine* 298:12 (1978): 650–58 and 298:13 (1978): 709–20; A. Enthoven, *Theory and Practice of Managed Competition in Health Care Finance* (New York: North-Holland, 1988).
- <sup>12</sup> World Health Organization, *1999 World Health Report* (Geneva: WHO, 1999); WHO, *European Health Care Reforms: Analysis of Current Strategies*, Series No. 72, (Copenhagen: WHO Regional Office for Europe, 1996); World Bank, *1993 World Development Report: Investing in Health* (New York: Oxford University Press, 1993); World Bank, *Sector Strategy: Health, Nutrition, and Population* (Washington: World Bank, 1997); and UNICEF, *State of the World’s Children* (New York: UNICEF, 1999).
- <sup>13</sup> For a review of the health care problems in the former socialist states see A.S. Preker and R.G.A. Feachem, *Market Mechanisms and the Health Sector in Central and Eastern Europe*, Technical Paper Series No. 293 (Washington: World Bank, 1996); (translated into Czech, Hungarian, Polish, Romanian, and Russian).
- <sup>14</sup> Most health economists—even those favoring a more competitive marketplace—recognize that government needs to play a significant role in the health sector. For an excellent recent review on this topic see T. Rice, *The Economics of Health Reconsidered* (Chicago: Health Administration Press, 1998). For a more detailed discussion on the theory and empirical evidence of public and private roles in health care financing, see P. Musgrove, *Public and Private Roles in Health: Theory and Financing Patterns* (Washington: World Bank, 1996); and G. Schieber (ed), *Innovations in Health Financing* (Washington: World Bank, 1996).
- <sup>15</sup> See D. Osborne and T. Gaebler, *Reinventing Government* (New York: Plume, 1993).
- <sup>16</sup> See R. Saltman and J. Figueras (eds.), *European Health Care Reform: Analysis of Current Strategies* (Copenhagen: WHO, 1997), pp. 213–14.
- <sup>17</sup> See J.Q. Wilson, *Bureaucracy* (New York: Basic Books, 1989); J.D. Donahue, *The Privatization Decision: Public Ends, Private Means* (New York: Basic Books, 1989); and World Bank, *World Development Report: The State in a Changing World* (New York: Oxford University Press, 1997).
- <sup>18</sup> C.J. Wolf, “A Theory of Non-Market Failure,” *Journal of Law and Economics* 22:1 (1979): 107–39; A. Peacock, “On

- the Anatomy of Collective Failure,” *Public Finance* 35:1 (1980): 33–43; D.L. Weimer and A.R. Vining, *Policy Analysis: Concept and Practice* (Englewood Cliffs, NJ: Prentice Hall, 1989); A.R. Vining and D.L. Weimer, “Government Supply and Government Production Failure: A Framework Based on Contestability,” *Journal of Public Policy* 10: 1 (1990): 1–22.
- <sup>19</sup> Much of this discussion is not new but firmly rooted in political and moral philosophy. See K. Arrow, *Arrow’s Theorem: The Paradox of Social Choice* (New Haven: Yale University Press, 1980.)
- <sup>20</sup> Although there are no technical limits, few countries like Switzerland use plebiscites, and only for major issues of national interest. Even then, it is an imperfect instrument due to low voter turnout.
- <sup>21</sup> Four interrelated causes have been identified that explain this observation (A.R. Vining and D.L. Weimer, “Government Supply and Government Production Failure: A Framework Based on Contestability,” *Journal of Public Policy* 10:1 (1990): 15). First, direct democracy usually prevents the overseer from knowing the preferences of society. Second, overseers (representatives) typically pay more attention to constituencies and sensational issues that are most likely to be influential in their reelection. Third, public officials usually have more than one overseer, often leading to conflicting and unstable political demands. Finally, since overseers do not fully benefit themselves from the effectiveness of their oversight, they often devote inadequate time and effort to this task, leaving bureaucrats with a large range of independence.
- <sup>22</sup> This conceptual framework was developed by M. Moore, *Creating Public Value* (Boston: Harvard University Press, 1995).
- <sup>23</sup> We will discuss this further in a later section under agency problems. T.L. Beauchamp, and J.F. Childress, *Principles of Biomedical Ethics*, 2d ed. (Oxford: Oxford University Press, 1983), p. 4; and E.J. Lemmon, E.J., “Moral Dilemmas,” *Philosophical Review* 71 (1962): 139–52.
- <sup>24</sup> See theoretical section for a more complete discussion of the principal-agent concepts. S. Bennett, B. McPake, and A. Mills (eds.), *Private Health Providers in Developing Countries: Serving the Public Interest?* (London: Zed Books, 1997).
- <sup>25</sup> E.F. Fama and M.C. Jensen, “Agency Problems and Residual Claims,” *Journal of Law and Economics* 26:2 (1983): 327–49.
- <sup>26</sup> D. Kaufmann and R. Ryterman, “Global Corruption Survey,” World Bank Working Paper (Washington: World Bank, 1998).
- <sup>27</sup> A. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Boston, Mass.: Harvard University Press, 1970; World Bank, *Sector Strategy: Health, Nutrition, and Population*.
- <sup>28</sup> See J. Robinson, “Physician-Hospital Integration and Economic Theory of the Firm,” *Medical Care Research and Review* 54:1 (March 1997): 3–24
- <sup>29</sup> OECD, *Regulatory Reform, Privatisation and Competition Policy* (Paris: OECD, 1992), p. 17.
- <sup>30</sup> D.E. Sappington, “Incentives in Principal-Agent Relationships,” *Journal of Economic Perspectives* 5:2 (1991): 45–66.
- <sup>31</sup> E.F. Fama, “Agency Problems and the Theory of the Firm,” *Journal of Political Economy* 88:2 (1980) 288–307; M.C. Jensen and W.H. Meckling, “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure,” *Journal of Financial Economics* 3 (1976): 305–60.
- <sup>32</sup> See O. Williamson, “Comparative Economic Organization: The Analysis of Discrete Structural Alternatives,” *Administrative Science Quarterly* 36 (June 1991): 69–296.
- <sup>33</sup> Two useful references include: O. Williamson, *The Economic Institutions of Capitalism: Firms, Markets and Relational Contracting* (New York: Free Press, 1985); and O. Williamson, “Transaction Cost Economics,” ch. 3 in R. Schmalensee and R. Willig (eds.), *Handbook of Industrial Organization* (New York: North-Holland, 1989).
- <sup>34</sup> See P. Milgrom and J. Roberts, “Bargaining Costs, Influence Costs, and the Organization of Economic Activity,” in J. Alt and K. Shepsle, (eds.), *Perspectives on Positive Political Economy* (New York, Cambridge University Press, 1990), pp. 57–89.
- <sup>35</sup> P. Milgrom and J. Roberts, *Economics of Organization and Management* (Englewood Cliffs, NJ: Prentice-Hall, 1992) p. 291–292.
- <sup>36</sup> Milgrom and Roberts, *Economics of Organization and Management*, ch. 9.
- <sup>37</sup> For example, a person may own a house but not have the right to occupy it if he has leased it out. He may own a car but not have the right to transfer it freely if he has a loan secured by the car.
- <sup>38</sup> M. Olson, *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities* (New Haven: Yale University Press, 1982).
- <sup>39</sup> N. Girishankar, “Reforming Institutions for Service Delivery: A Framework for Development Assistance with an Application to the HNP Portfolio,” *World Bank Policy Research Working Paper 2039* (Washington: World Bank, 1999).
- <sup>40</sup> W.J. Baumol, J.C. Panzar, and R.D. Willing, *Contestable Markets and the Theory of Industrial Structure* (New York: Harcourt Brace Jovanovich, 1982); and W.J. Baumol, “Towards a Theory of Public Enterprise,” *Atlantic Economic Journal* 12:1 (1984): 3–20. For a critique of this theory, see W.G. Shepherd, “Contestability vs. Competition—Once More,” *Land Economics* 71:3 (August

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1995): 299–309; and W.G. Shepherd, “Contestability vs. Competition,” *American Economic Review* 74:4 (1984): 572–87.

<sup>41</sup> An asset is specific if it makes a much larger contribution to the production of a good than its value in alternative uses. See B. Klein, R.G. Crawford, and A.A. Alchian, “Vertical Integration, Appropriable Rents and the Competitive Contracting Process,” *Journal of Law and Economics* 21:2 (1978): 297–326.

<sup>42</sup> Adapted from N. Manning, “Unbundling the State: Autonomous Agencies and Service Delivery,” Draft World Bank Discussion Paper, 1998.

<sup>43</sup> See A.S. Preker and A. Harding (eds.), *Innovations in Health Service Delivery: Corporatization in the Hospital Sector* (Baltimore: Johns Hopkins University Press, 2000); forthcoming. In other parts of the public sector, such autonomous and corporatized units are also variously referred to as public or executive agencies, independent public organizations (IPOs), quasi-autonomous nongovernmental organizations (QANGOs), and state-owned enterprises (SOEs). There is no standard functional distinction between these different organizational modalities.

<sup>44</sup> C. Ham, “Priority Setting in Health Care: Learning From International Experience,” *Health Policy* 42:1 (1997): 49–66.

<sup>45</sup> Musgrove, P, “Public Spending on Health Care: How Are Different Criteria Related?” *Health Policy* 47 (1999): 207–23.

<sup>46</sup> See A. Harding and A.S. Preker (eds.), *Private Participation Toolkit* (Washington: World Bank, 2000); forthcoming.

<sup>47</sup> R. Herzlinger, *Market Driven Health Care: Who Wins, Who Loses in the Transformation of America’s Largest Service Industry* (Reading, Mass.: Perseus Books, 1997).

<sup>48</sup> N. Manning, “Unbundling the State: Autonomous Agencies and Service Delivery”; and Bennett, McPake, and Mills, *Private Health Providers in Developing Countries*.

<sup>49</sup> See Preker and Harding, *Private Participation Toolkit*.

<sup>50</sup> See Musgrove, *Public and Private Roles in Health*.

<sup>51</sup> See Harding and Preker, *Private Participation Toolkit*.