

2

KAREN EGGLESTON
RICHARD ZECKHAUSER

Government Contracting for Health Care

AROUND THE WORLD the governments of industrialized nations finance health services. Such financing is justified or rationalized on efficiency grounds in some instances; in other contexts distributional or political considerations play the major role. Health-care services are sometimes provided directly by government, sometimes through government-financed enterprises in both the public and private sectors. Although the focus in this chapter is on health care, the analytic framework should prove useful for other contracting contexts as well.

In this discussion we draw upon the property rights theory of ownership.¹ This theory, based on a framework of incomplete contracting, is helpful because it tells us that ownership structure matters, but only when contracts are incomplete.² Contract incompleteness is an inherent institutional feature of health care.³ Uncertainty and its delinquent nephew, asymmetry of information, are extraordinarily important for health care. Together they produce problems of moral hazard, adverse selection, non-contractible quality, and costly consumer search. These factors accompany

We are grateful to participants in the 2001 Visions of Governance in the Twenty-First Century Project, particularly Robert Blendon, Jack Donahue, Minah Kim, Robert Lawrence, Georges de Menil, Joseph Newhouse, Paul Peterson, and Guy Stuart, for many useful suggestions.

the supply-side market power wielded by highly trained medical professionals, with their monopoly license, and by hospitals and provider networks in some markets.⁴ These features sour the economist's dream of paying for health services through an efficient contingent-claims market or through complete ex ante contracts that specify the efficient quantity and quality of medical services for each possible medical condition for each consumer. The incomplete contract theory of ownership highlights the link between incentives for innovation and contractual incompleteness, a linkage that bestows power upon those with residual control rights. This spotlight on innovation is particularly helpful given the undisputed importance of rapid technological advance in modern health care.⁵

A purchaser of health care must take account of the health-care triad of patient, insurer, and provider. For simplicity, our analysis abstracts from this distinction between insurer and provider on the supply side, implicitly assuming that government contracts with an integrated insurer-provider such as a managed care organization (for example, a health maintenance organization [HMO] or preferred provider organization [PPO]). This formulation illustrates the distinctive institutional features of contracting for health care, many of which stem from the fact that health care, even when totally government financed, is overwhelmingly privately consumed. It is thus a salient example of a directed good, as is education.⁶ Such goods differ in important ways from public goods (national defense or basic research, for example) and limited or local public goods (local police services or road repairs, for example). Although they may involve a limited element of externalities and public goods, their benefits flow overwhelmingly to individual consumers. All directed goods are by their nature redistributive.⁷

Any analysis of the optimal division of production responsibilities in the health-care sector among services financed by government must address two questions. First, what fraction of services should be produced by the government directly, by the for-profit sector, and the nonprofit sector? Second, taking as given these three fractions, which services should be in which sector?

The first is a question of absolute advantage—which ownership form delivers health services most effectively?—and it is the issue that generates the most intense political debate. The second is a question of the comparative advantage of different ownership structures for different health-care services, and it is the focus of this chapter. If the final allocation of expenditure levels across sectors is not in conflict, in what order should services be placed in the for-profit, nonprofit, and government sectors? In theory, Republicans and Democrats, Labourites and Conservatives, Socialists and

Christian Democrats should be able roughly to agree on this question, even though they might be bitterly divided on the amounts they would like to place in each of the three sectors. Suppose economists agreed, for example, that public and private providers had a comparative advantage for severe mental and regular dental health services, respectively. Then even if policy advisers (for example, advisers to postsocialist economies) disagreed regarding what overall share of hospitals and clinics should be public or private, they could nevertheless agree that any privatization program should apply first to dentists and last to inpatient mental health facilities.

After identifying the comparative advantages of public, private non-profit, and investor-owned (for-profit) providers, we then briefly consider the markets that bear and incentives that act on these structures. We argue that for health care, just as important as ownership in itself are such factors as competition, payment incentives, and hardness of budget constraints. This implies that *how* to contract out, or how one is able to contract out, matters as much as whether or not to do so and to whom.

Our analysis is informed primarily by two sets of experiences. The first is that of the United States (and, to a lesser extent, other established market economies), both because it is familiar and because it receives plentiful coverage in the health economics literature. The second is that of the nations of eastern Europe, where the health-care sector has been swept along with the broader economic forces unleashed by the transition from planned to market economies. We focus on this region partly because arguments from comparative advantage are most relevant for systems undergoing the changes that occur when the status quo dictated by history and ideology is eroding. Although the experiences of eastern European nations are far from uniform, and the differences between the United States and eastern Europe are dramatic, these disparities make the similarities identified—the importance of payment incentives, competition, and hard budget constraints as much as ownership form—all the more striking.

These similarities seem broadly applicable. Table 2-1 lists the health-care systems in the twenty-nine member countries of the Organization for Economic Cooperation and Development and their performance rankings as assessed by the World Health Organization (WHO).⁸ The twenty highest-ranked countries worldwide include countries with public shares of financing both well above (Luxembourg, United Kingdom) and well below (Portugal, Greece) the average of the European Monetary Union (about 75 percent; see table 2-2), as well as countries in which the private share of inpatient beds ranges from minimal (Norway, United Kingdom)

Table 2-1. *Public Financing of Health Care in OECD Countries, Private Share of Inpatient Beds, and WHO Health System Performance Rankings*
Percent, except as indicated

Country	Health expenditure as share of GDP	Public share of total health expenditure	Private share of total inpatient care beds	WHO Health System Performance ranking (out of 191)
Luxembourg	7.0	91.8	n.a.	16
United States	13.9	46.4	66.8	37
Norway	7.5	82.2	0.1	11
Switzerland	10.0	69.9	n.a.	20
Denmark	8.0	83.8	0.7	34
Iceland	7.9	83.8	n.a.	15
Japan	7.2	79.9	65.2	10
Canada	9.2	69.8	0.9	30
Belgium	7.6	87.6	61.9	21
Austria	8.3	73.0	30.3	9
The Netherlands	8.5	72.6	85.0	17
Australia	8.4	66.7	56.6	32
Germany	10.7	77.1	51.5	25
France	9.6	74.2	35.2	1
Italy	7.6	69.9	21.9	2
Finland	7.4	76.0	4.7	31
Ireland	6.3	76.7	n.a.	19
United Kingdom	6.8	84.6	3.7	18
Sweden	8.6	83.3	23.6	23
New Zealand	7.6	77.3	0.1	41
Spain	7.4	76.1	32.5	7
Portugal	7.9	60.0	21.7	12
Korea	6.0	45.5	90.3	58
Greece	8.6	57.7	29.6	14
Czech Republic	7.2	91.7	9.1	48
Hungary	6.5	69.1	n.a.	66
Mexico	4.7	60.0	25.6	61
Poland	5.2	90.4	0.2	50
Turkey	4.0	72.8	5.2	70

Sources: Organization for Economic Cooperation and Development, *OECD Health Data 99: A Comparative Analysis of Twenty-nine Countries* (Paris, 1999); World Health Organization, *World Health Report 2000, Health Systems: Improving Performance* (Geneva, 2000).

Note: Countries are listed from highest to lowest 1997 per capita GDP (measured in purchasing-power parity terms). Data for first three columns are for 1997; data for last column are for 2000.

Table 2-2. *Public Financing of Health Care, by World Region*
Percent

<i>Region</i>	<i>Total health expenditure as share of GDP</i>	<i>Public health expenditure</i>	
		<i>As share of GDP</i>	<i>As share of total health expenditure</i>
Low-income countries	4.20	1.30	30.95
Middle-income countries	5.70	3.10	54.39
High-income countries	9.80	6.20	63.27
East Asia and Pacific	4.10	1.70	41.46
Latin America and Caribbean	6.60	3.30	50.00
Middle East and North Africa	4.80	2.40	50.00
South Asia	4.80	0.80	16.67
Sub-Saharan Africa	3.20	1.50	46.88
European Monetary Union	8.90	6.60	74.16

Source: Data from World Bank, *World Development Indicators 2000* (World Bank, 2000), pp. 90–92.

Note: Public health expenditure includes compulsory social insurance contributions. Data are for most recent year available from 1990 to 1998.

to dominant (Japan, the Netherlands).⁹ Postsocialist Slovenia ranks neck-and-neck with the always capitalist United States in overall health system performance (United States thirty-seventh, Slovenia thirty-eighth; data not shown), according to the WHO study.¹⁰ Although the appropriateness and accuracy of the WHO assessment rankings are debatable, these comparisons nevertheless highlight the heterogeneity of purchasing and delivery systems—even among established market economies—and the widespread importance of government contracting for health care.¹¹

We focus on government purchasers of health care and assume that the purchaser's sole goal is to maximize social welfare. The conceptual framework of comparative advantage should nevertheless be useful to other purchasers, such as employers, and can be adapted to different goals.¹² The focus on comparative advantage suggests that the purchaser may wish to contract with multiple ownership forms simultaneously. However, the administrative complications that may arise from such contracting and the potential efficiency benefits of a mixed delivery system largely lie outside the scope of the analysis.¹³

A final caveat needs mention. Although we focus on comparative advantage and government contracting, we recognize that the development of a

nation's health-care system more closely resembles a dynamic ecosystem, with public and private agents interacting over time within the social and political context to shape the delivery system. Our hypothesis is that the allocation of health-care services across ownership forms tends to reflect patterns of comparative advantage, except where there are impediments to its function. At times such impediments—such as regulatory barriers, the political economy of reforms, lack of access to capital for nonprofits, or other important social and ideological factors—may overpower comparative advantage in determining a system's historic trajectory.

Performance Differences by Ownership Type

Although some studies find performance differences between public and private providers, the evidence is far from conclusive. Frank Sloan notes some troubling results showing lower quality of care in public hospitals, although findings are mixed regarding efficiency despite clear differences in mission.¹⁴ Using 1980s Medicare data, E. B. Keeler and colleagues report that on average the quality of care is lower in public hospitals than in private hospitals. However, “public teaching hospitals in 1986 had better process [quality] than private hospitals, and the city-county hospitals had generally high quality, perhaps because most were large and teaching hospitals.”¹⁵ A recent study finds that heart attack patients treated in Veterans Health Administration hospitals had more coexisting conditions than Medicare patients, though there was no significant difference in mortality, suggesting at least equivalent quality of care.¹⁶

The paucity of definitive differences between public and private providers could be considered surprising, given the myriad constraints imposed on public facilities. Government-owned hospitals usually have less autonomy than private hospitals, especially with regard to employment and compensation, a fact that can hamper efforts to attract and retain the most capable clinicians and managers. Public hospitals also usually cannot turn away patients.¹⁷

Many studies of ownership effects examine differences in community benefit—defined to include such unprofitable services as charity care and bad debt, care for public program beneficiaries, community services such as twenty-four-hour trauma centers, programs for special needs populations, and teaching and research.¹⁸ Public hospitals, along with major teaching hospitals, provide a disproportionate share of community benefits

according to virtually all definitions of that term.¹⁹ Public facilities clearly form the backbone of the U.S. hospital “safety net.”

Studying short-term acute-care hospitals in California and Florida, Richard Zeckhauser, Jayendu Patel, and Jack Needleman find significant evidence of “sloughing” by private providers—that is, a reduction in the rates of uncompensated care when public hospital beds are abundant.²⁰ More recent studies find similar results.²¹ Such evidence suggests that government health-care facilities act as “providers of last resort” for uninsured, low-income, or otherwise disadvantaged patients. Studies of privatization of U.S. public hospitals confirm that conversions often lead to reductions in uncompensated care.²²

Much of the U.S. literature on health-care ownership sets aside public hospitals to focus on for-profit and nonprofit providers. Some scattered evidence seems to support the view that nonprofits attend more to nonpecuniary aspects of health care, such as community benefits, than do their for-profit counterparts. “For-profit hospitals,” for example, “are more likely than nonprofits to pressure physicians not to admit uninsured and Medicaid patients, and physicians report conflict over the treatment of indigent persons more often in for-profit than in nonprofit hospitals.”²³ For-profit providers also have been shown to engage in higher average levels of “upcoding” to maximize government reimbursement—by coding treatment for pneumonia as respiratory infection, for example, which pays 50 percent more.²⁴ These results reinforce anecdotes about for-profits’ exploiting opportunities for fraud.²⁵

Nonprofit organizations often provide more charity care and other community benefits than for-profit providers, although whether nonprofits provide community benefits in excess of the value of their tax exemptions is a controversial question.²⁶ Part of the difference arises from systematic differences in location. Within the same market, nonprofits and for-profits seem to behave similarly, perhaps driven by competition or by the tendency for organizations to mimic one another’s success—what Paul DiMaggio and Walter Powell call “mimetic isomorphism”; but for-profits tend to locate in communities that are more profitably served, so that comparisons based on national aggregate data can be misleading.²⁷

Few studies find any consistent evidence of differences in cost, efficiency, or quality between nonprofits and for-profits or in their provision of charity care or public goods.²⁸ Zeckhauser and colleagues find for-profit and nonprofit hospitals to be of similar efficiency and to offer similar services (including “noncore” unprofitable services), with local market norms and historical

presence or absence of nonprofits also important in explaining local variations.²⁹ Daniel Kessler and Mark McClellan, analyzing longitudinal data on nonrural Medicare beneficiaries hospitalized for heart attacks, find that within a market, for-profit and nonprofit behavior is similar.³⁰ Even the provision of goods and services that are (local and general) public goods, such as teaching and research, does not seem to differ systematically between investor-owned (for-profit) and non-investor-owned (nonprofit) private hospitals.³¹ Most experts would agree that “two decades of research has failed to provide definitive empirical evidence on the differences between for-profit and nonprofit health-care facilities and on the social consequences of changes in ownership.”³² “Overall, the evidence suggests that for-profit and private not-for-profit hospitals are far more alike than different.”³³

Simple Conceptual Framework

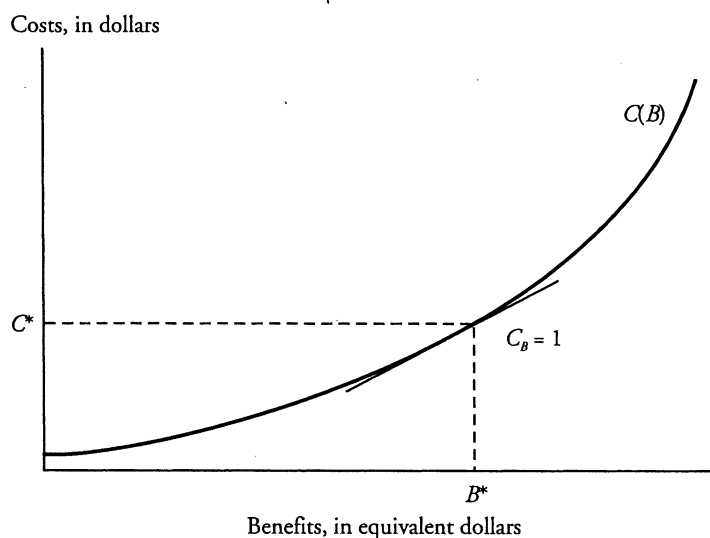
A government purchaser of health care must decide whether to provide services “in-house” (that is, through vertically integrated public facilities) or by contracting out to a private health plan, hospital, or physician group. Our analysis focuses on the contract between the government and the manager of the delivery institution.³⁴

Throughout the analysis, we assume that all providers are a priori equally productive. We first illustrate the potential importance of different preference trade-offs regarding cost and quality, using quantitative data. In the remainder of the analysis, however, we abstract from initial differences and focus instead on providers with identical, or at least similar, preferences.³⁵ Thus, in this framework, comparative advantage arises endogenously from the property rights structure of different ownership forms, not from an assumption that public and private providers innately differ in their production capabilities or in their preferences regarding cost and quality.

Benefits, Costs, and the Purchaser's Objectives

Assume that a provider of a health service can provide patients with treatment benefits (or quality), B . B is measured in dollar units—for example, through willingness to pay. The cost of producing B is $C(B)$. Costs and marginal costs are both increasing in B .

The purchaser seeks to maximize social surplus—that is, benefits minus costs, or $B - C(B)$. If contracts were complete, the purchaser would contract

Figure 2-1. *The Social Optimum*

for optimal quality B in exchange for payment R , where $R \geq C(B)$. B is the level at which an additional dollar's worth of benefits costs just a dollar to produce or, in the language of economics, the point at which marginal benefit equals marginal cost. Figure 2-1 illustrates this result.

Assuming that public and private providers are equally competent and therefore have the same initial cost function, $C(B)$, the contract could be with a public provider or a for-profit or nonprofit private provider, with exactly the same result. If patient benefits fall short of B^* , the provider has to return some or all of the prepayment R .

The great challenge is that many aspects of quality for a health service are not contractible. Suppose instead that only minimum quality B_{\min} is contractible—because, for example, B_{\min} is readily observable or is a widely accepted norm. The purchaser would like to contract with the provider to choose quality B^* greater than B_{\min} . However, the purchaser cannot enforce a breach of such a contract—by firing the employee or “firing” the independent contractor by switching to an alternative provider—unless quality falls below the level of B_{\min} .³⁶ The provider therefore has a default option of always providing the basic service at the minimum acceptable level B_{\min} at corresponding minimum cost $C(B_{\min})$. Under this scenario, the purchaser will face the same contracting challenges of motivating B^* for both

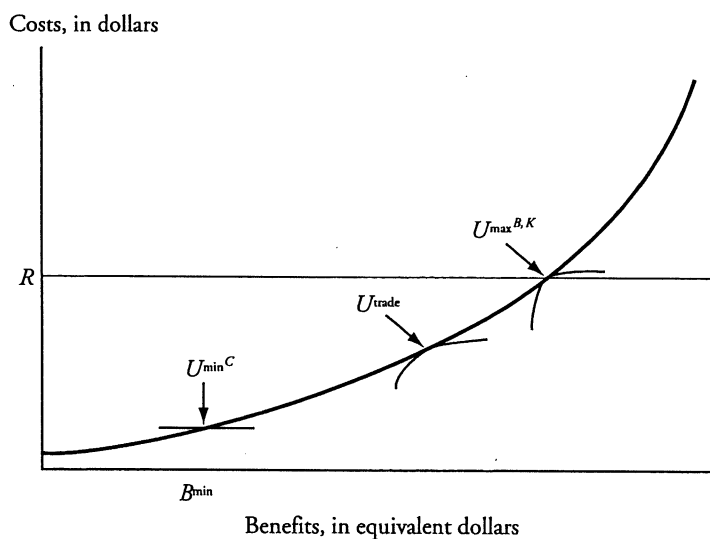
public and private providers. Ownership in terms of control rights over the health service facility once again does not affect the outcome unless we assume that different ownership forms foster a different preference trade-off between B and C . Preference differences are explored in the next subsection. A second possibility, examined in the remainder of the chapter, is that purchasing takes place in a multiperiod context in which postcontractual innovations are important.

Different Preference Trade-offs Regarding Benefits and Costs

Providers with the same cost function but different preferences will choose to produce different levels of benefits, as illustrated in figure 2-2. The figure considers three idealized types, which may or may not correspond to ownership forms (government, nonprofit, and for-profit). Consider first a provider who values only net revenue, $R - C(B)$, as an economics text might posit. The indifference curves of such a provider would be horizontal, representing the desire to minimize cost under prepayment ($U^{\min C}$). Such a provider would choose barely to fulfill the letter of the contract by providing minimum quality.

In contrast, if a provider were altruistic, valuing quality as well as net revenue, the positive marginal rate of substitution between B and C would encourage the provider to choose higher (and costlier) points on the cost curve. In the figure, a provider with preference U^{trade} is willing to trade off between B and C . Depending on the level of altruism and concern with cost, the chosen combination of cost and quality could be below, equal to, or above the socially desired level.

A third class of providers may actually wish to maximize benefits, perhaps owing to strong altruism or because it reaps prestige from offering high-quality services. In figure 2-2, such a provider has preferences $U^{\max B, K}$, implying that it would like to maximize benefits subject to a break-even constraint K . Such a "gold plater" would have an indifference curve that is steeply sloped before the break-even constraint binds (that is, the point at which $C < R$), indicating willingness to increase cost considerably to achieve higher benefits. At the constraint, there is a downward kink in the indifference curve. Beyond this kink, at which point extra spending connotes negative net revenue, the provider continues to value quality but is willing to pay much less per unit to provide it. Others have posited similar behavior by health-care providers.³⁷

Figure 2-2. *Examples of Provider Preferences*

The purpose of figure 2-2 is not to characterize the preferences of different provider types; that would be of limited use, particularly given the significant variability within types. It is, rather, to stress the importance of considering provider preferences when contracting capabilities are limited. However, we do not focus on differences in provider preferences or production capabilities in the remainder of the analysis, for at least two reasons. First, no ownership form has a monopoly on altruism. Second, a useful theory of ownership should explain why differences in efficiency arise. It seems unsatisfying to base a theory of the comparative advantage of public, private for-profit, and private nonprofit providers on exogenous assumptions about how provider preferences and altruism correlate with ownership status or how initial production capabilities differ across ownership types.

Endogenous Differences Emerging across Ownership Types

A useful theory of differences between public and private ownership should start by asking whether a single provider would act differently as a government employee or as an independent contractor, given the same human

capital, productive efficiency, and altruistic concern for patients. The property rights theory of ownership, based on incomplete contracts, suggests an affirmative answer. In this theory, ownership matters to the extent that changes over time in the way a good or service is delivered, such as innovations in quality improvement and cost control, cannot be spelled out explicitly in a contract *ex ante*. Important opportunities for innovation will therefore arise after a contract has been negotiated, drawn up, and signed. Incentives for such innovations will depend crucially on who has control rights to implement, and will thereby capture the benefits from, those innovations.

In the incomplete contracting approach, ownership is defined as the allocation of residual control rights over a nonhuman asset, such as a hospital. Oliver Hart, Andrei Shleifer, and Robert Vishny develop this framework and apply it to prisons.³⁸ The service (prison management) is assumed to be a public good. The manager receives a fixed payment, either a salary or a contracted price, contingent on delivery of the basic service for a specified period of time. In the model, private owners typically have stronger incentives to invest in cost and quality innovations but may overinvest in cost reduction because they ignore the adverse impact on noncontractible quality. The theory presented by Hart, Shleifer, and Vishny suggests that costs are always lower under private ownership, but quality may be higher or lower. The authors presume prepayment. They do not explicitly model competition, choice of quantity of treatment per consumer, differences between for-profit and nonprofit providers, soft budget constraints, or the contracting challenges arising from consumer heterogeneity.

Postcontractual Innovations

Suppose that a health service provider faces two choices, each of which affects cost and quality: the level of up-front cost-reducing investment, e , to be undertaken and the intensity of treatment, q , to be delivered to each patient. An up-front investment in cost reduction costs the provider e but decreases the marginal cost of producing quality (in effect, the cost curve $C[\cdot]$ is shifted downward). The provider must incur an observable but not verifiable cost per patient treatment episode of $C(e, q)$. This cost is decreasing in e , with decreasing marginal returns, and increasing in q , with increasing marginal costs. Patient benefits from treatment, $B(e, q)$, may be adversely affected by the quality-damaging side effects of cost reduction and are increasing and concave in intensity of treatment over the relevant range.

Assume that the contract between the government and the provider is incomplete in the sense that only minimum quantity per patient, q_{\min} , is contractible. Treatment costs, quantity above q_{\min} , and cost innovations are noncontractible, albeit mutually observable. Implementation of innovations requires approval from the facility owner and may not be forthcoming unless the purchaser agrees to pay additionally for them. The purchaser would like to encourage innovations but does not want excessive cost control at the expense of (noncontractible) quality.

The Performance of Government, For-Profit, and Nonprofit Forms

Consider the likely outcome under direct government provision. The government purchases a health service for its beneficiaries by employing a provider G to run a public facility, such as a hospital or a clinic. By choosing to provide the health service in-house, the government retains control rights over the nonhuman assets (the hospital or clinic). The job description of the provider G specifies provision of the basic service. The public provider may take initiative to control costs in ways not specified in the original contract, which may affect service quality. As a civil servant, however, G must obtain approval from his or her supervisor or other relevant authority before innovations can be implemented.

The government seeks to maximize benefits to patients, less prepayment R and any payments made when renegotiating for changes not specified in the initial contract. Without renegotiation to obtain approval and compensate G , innovations are not forthcoming. With renegotiation, the net benefit from the improved service is split between government and G . We illustrate the effects of renegotiation assuming that net gains are shared equally.

The public provider G is assumed to seek to maximize payment, including compensation for innovation, less the cost per case and the effort costs of developing innovations. Without renegotiation for permission from government supervisors, the public provider cannot implement investment e and therefore would not want to invest in cost reduction. Moreover, because the provider bears the cost of treatment q but receives no extra compensation for additional treatment, G would choose to provide minimum intensity of treatment.

However, because the government purchaser can benefit from encouraging an appropriate amount of cost control and intensity of treatment, renegotiation will almost surely take place. By anticipating the surplus

from renegotiation, G implicitly takes some account of how his or her choices of e and q will affect the benefits the patient receives from use of the service. However, G cannot reap the full rewards of his or her cost-control initiatives; indeed, given the constraints on government employee compensation, G may be able to reap no more than a tiny fraction of them.³⁹ As a result, despite having internalized the quality-damaging side effects of cost control, G may have stunted incentives for cost innovations. The latter is a cause for concern, especially in light of rapid advances in health technology. In a dynamic setting, even a slightly stunted incentive for innovation would lead to cumulatively low levels of innovation, so that such a provider would end up considerably behind the technological frontier. Because lack of control rights, and therefore stunted incentives for innovation, seems inherent to public ownership, a government purchaser of health services may wish to consider alternative purchasing strategies, such as contracting out to a private provider.

The likely outcome under for-profit ownership is quite different. Assume a for-profit private provider Π seeks to maximize net revenues—prepayment less the costs incurred in treating patients and in developing cost-control innovations. As the owner of the facility, Π can implement e without seeking the purchaser's permission. Π therefore has maximum incentives to reduce cost, both by investing in cost-reduction innovations and by skimping on treatment, irrespective of the negative impact on patient benefits.

From the purchaser's perspective, although the goal of cost-control innovation is furthered by contracting out to Π , there is a significant mismatch in goals that may lead to excessive cost cutting, thereby damaging quality. The private provider has stronger incentives to invest in cost control; hence e^Π will be greater than e^G , and the cost curve of the for-profit provider will lie below that of the public provider. In this case, contracting out is potentially much more efficient. Nevertheless, by retaining residual control rights over the facility under G , the government can achieve greater fidelity to purchaser goals—that is, more of the payment will flow into patient benefits rather than provider net revenue.⁴⁰ Even with identical preferences, public and private providers will make different investment choices because they have different claims on the returns from those investments.

This model suggests that the optimal ownership structure depends on the relative trade-off between higher fidelity under public ownership and greater productive efficiency under private for-profit ownership. Public providers have a comparative advantage for delivering services for which

large adverse side effects may accompany aggressive cost control. By contrast, for-profit providers have a comparative advantage for services for which the quality damage from cost control is slight to nonexistent, or cost control enhances quality, or policies are available that ameliorate the incentives for or consequences of excessive cost control.

QUALITY INNOVATIONS. The basic framework presented above extends readily to allow for providers to invest in quality-enhancement innovations, i , as well as cost-control innovations, c . Assume that quality-improvement investments increase benefits from treatment but add to costs of care. Renegotiation occurs in the same way as it does for cost-control innovations. Thus, as is the case with cost-control innovation, a public provider will have stunted incentives for quality innovations. Indeed, public providers are not known for being on the cutting edge of either medical quality-improving or cost-reducing innovations.⁴¹

A for-profit provider, by contrast, can reap the entire surplus from implementing innovations because Π has sole control over the relevant nonhuman assets. However, quality-enhancement investments, unlike cost-cutting innovations, do not increase Π 's net revenue unless additional payment is forthcoming, either from the purchaser or from additional patients seeking care from that provider. The purchaser will in general find it optimal to negotiate with a single-source private provider to enhance quality in exchange for additional payment. We assume that the bargain is struck so that half the surplus value generated from the quality innovation goes to the provider and half to the purchaser. This produces an outcome in which, as Hart, Shleifer, and Vishny have found in prison management, quality is higher than it would otherwise be because Π anticipates renegotiation.⁴² However, because Π receives only half the surplus, Π 's chosen level of quality enhancement, i , will typically still be less than is socially optimal and may be no higher than that of public providers. This shows that private ownership, despite Π 's greater control rights over the surplus from innovation, does not always lead to high levels of innovation.

COMPARATIVE ADVANTAGES OF PUBLIC AND PRIVATE FOR-PROFIT OWNERSHIP. The foregoing analysis comparing public to for-profit private ownership does not yield an unambiguous ranking of ownership forms. A for-profit private provider will always have greater incentive for cost control and thus lower cost for a given quality. However, a for-profit's excessive cost control may lead to large adverse impacts on noncontractible quality, counteracting the advantage of higher incentive for quality-improvement innovations. A public provider's incentives for innovations

will generally be stunted compared with those of a for-profit private provider. Nevertheless, these stunted incentives are sometimes efficient (for example, limiting quality-damaging cost control and skimping on intensity of treatment). The public provider will be less responsive than a private contractor—with less risk of overzealous cost cutting but also less incentive to pioneer quality breakthroughs and creative cost-control methods. Whether in-house provision is preferable to contracting out to a for-profit provider will depend on several issues: the characteristics of the health services in question, the ability to specify desired quality and treatment intensity in the contract, the availability of complementary purchasing strategies (such as allowing patient choice of provider to motivate investment in quality enhancement), and similar factors.

This comparison still leaves out an important option for many purchasers, the possibility of contracting out to a not-for-profit (nonprofit) private provider. Does the nonprofit ownership option present distinct advantages? Any attempt to answer that question requires a conceptual framework for distinguishing and analyzing nonprofit ownership.

ALTRUISM, COST CONTROL, AND NONPROFIT OWNERSHIP. The theory of nonprofit behavior stirs controversy.⁴³ Because of their prevalence in the health sector, the behavior of nonprofits has been the focus of considerable theoretical work by health economists.⁴⁴ The framework used here, based on the property rights theory of ownership, focuses on residual rights of control. Although residual control rights and residual income rights are often bundled together on a one-to-one basis, they need not be;⁴⁵ and they are not bundled in nonprofit enterprises. Arguably, nonprofits also seek to maximize net revenues, or “profits,” but instead of distributing those funds to shareholders, nonprofits allocate them to uses that firm insiders select, such as community benefit programs, “contingency funds,” or higher employee perks. This suggests that nonprofit providers have control rights similar to those of for-profit private providers but have murkier claims to residual income and may even have to distort surplus to channel it into forms they can appropriate (for example, perks, such as attractive offices, rather than dividends).⁴⁶

At least two characteristics of nonprofit providers are important for health-care purchasers: first, nonprofit ownership may develop as a signal of trustworthiness to consumers; second, incentives for cost control may be diminished because residual income cannot flow directly into a nonprofit provider’s pocket (the celebrated “nondistribution constraint”).⁴⁷ In this analysis we capture the first characteristic by assuming that nonprofit own-

ership is associated with a degree of altruism, or agency on behalf of patients, that is at least as great on average as in for-profits. In other words, agency problems between patients and nonprofit providers are no greater, and are sometimes less, than those between patients and for-profit providers.

Our hypothesis is consistent not only with Henry Hansmann's idea of nonprofit status as a signal of trust but also with previous theory and empirical evidence, as discussed in the foregoing section on performance differences by ownership type.⁴⁸ Two important caveats should be noted, however. First, a higher degree of fealty to patient desires is not always socially desirable from an ex ante point of view: altruistic providers indulge patient moral hazard more than their less altruistic counterparts, resulting in inefficient overutilization of services.⁴⁹ Second, there is no inevitable link between nonprofit status and high fidelity to patients. Competition may change the "mission" of nonprofits so that they resemble for-profits in all but name.⁵⁰ This factor could help to explain the overall similarity of nonprofit and for-profit providers in competitive settings.

Recent empirical evidence lends credibility to the idea that nonprofit and for-profit behavior is closest in competitive environments. For example, in his examination of how hospitals respond to financial incentives to treat low-income patients, Mark Duggan finds that nonprofit hospitals in areas with many for-profit competitors are significantly more responsive to financial incentives than other nonprofits.⁵¹ This finding is consistent with the idea that competitive pressure makes nonprofits more profit oriented. Richard Arnold, Marianne Bertrand, and Kevin Hallock find that nonprofit hospitals compensate top executives more according to profitability as HMO penetration in the hospital's market increases.⁵² Studying the tendency of hospitals to "upcode" Medicare reimbursements to obtain greater revenue, Elaine Silverman and Jonathan Skinner find that nonprofits operating in heavily for-profit markets upcoded at rates similar to those of their for-profit competitors.⁵³

Applying the property rights theory to nonprofit providers, assume that the objective of the nonprofit provider, N , is to maximize utility from net compensation and from altruistic pleasure associated with patient benefits. Further assume that for a nonprofit provider to reap benefit from the firm's net revenue, surplus must be distorted slightly (for example, from cash to perks), implying that a fraction of the surplus gets dissipated. Altruism on the part of a provider increases the incentive to provide socially optimal cost and quality innovations and combats incentives to skimp on treatment. The

provider with a high regard for altruism takes full account of the impact of innovations and treatment intensity on patient benefits and hence internalizes the full social marginal benefit. As Kenneth Arrow suggests, a "perfect agent" can balance the interests of patients and society.⁵⁴ However, excess identification with patient interests can lead to overemphasis on quality at the expense of cost, encouraging moral hazard and wasteful overuse.

The nonprofit provider's lack of direct access to residual income can also lead to distortions. Unable to capitalize on the net revenue benefits of cost control and quality investment, N may overemphasize quality (high i and q) at the expense of cost (low e). This problem may be acute in medical care, where quality is often associated with prestige and there is ample latitude to overprovide services.⁵⁵ The framework suggests that N has diminished incentives to invest in cost control because he or she can reap only a fraction of the benefit generated by that investment. Therefore, a nonprofit, like a government provider, may invest too little in cost-reducing innovations. Renegotiation with the purchaser can move toward a socially preferred outcome but cannot fully restore efficiency if the original incentives were distorted, because the provider receives only half the gain in surplus from renegotiation.

If this model of altruism and nonprofit behavior reasonably approximates reality, then the comparative advantage of nonprofits lies in their ability to combine the flexibility of private ownership with the patient-centered concerns of the public purchaser. In a sense, nonprofits lie "in between" public and for-profit private ownership, with concomitant strengths and weaknesses. However, to pin down the full comparative advantages of different ownership forms, we must go beyond the simple setting used so far.

The Effect of Institutional Characteristics

A purchaser must decide not only with whom to contract for health services but also how to structure the contract to offset the limitations of public and private ownership. Contract structure implies questions regarding the additional instruments available to purchasers (for example, payment incentives and competition) and their interaction with additional contracting challenges inherent in purchasing quality health care (for example, patient heterogeneity, patient selection concerns, and soft budget constraints).⁵⁶

PAYMENT INCENTIVES. Different payment structures may be useful for aligning provider incentives with purchaser goals. For example, whereas

prepayment systems such as capitation (in which a uniform per capita fee is paid) encourage limiting q (for example, to q_{\min}), fee-for-service payment systems reward high utilization. Indeed, fee-for-service reimbursement may result in excessive utilization stemming from providers' indulging patient moral hazard or even from "supplier-induced demand."⁵⁷

The correlation between disaggregated (fee-for-service) payment and higher cost emerges empirically both at the broadest (national) and narrower (organization and individual physician) levels. For example, Ulf Gerdtham and Bengt Jönsson, controlling for an array of economic and institutional factors, find a 17 to 21 percent higher average expenditure in fee-for-service payment systems as compared with capitation systems in member countries of the Organization for Economic Cooperation and Development.⁵⁸ At the level of the individual clinician, capitation or salary payment is associated with less service use. In the United States, after the prospective payment system (PPS) was introduced for hospitals, admissions generally declined, average lengths of stay fell, and some patients got dumped to non-PPS facilities, consistent with the incentives of case-based payment.⁵⁹

Eastern European countries as well have seen significant reactions to payment incentives, although the evidence to date is mostly anecdotal. In Hungary, provider reimbursement reforms introducing aggregated prepayment (capitation payment for family doctors and case payment for hospitals) "have had a much greater impact on the character of service delivery than earlier changes in ownership."⁶⁰ Real health-care spending in the Czech Republic increased by almost 40 percent in the two years following the introduction of an open-ended fee-for-service system.⁶¹ Physicians in private practice who were paid on a fee-for-service basis billed significantly more in every category of service than did state (primarily salaried) providers.⁶² The expenditure-increasing effects of the fee-for-service system proved so powerful that in 1997 Czech policymakers chose to revert to a global-budget method of payment.

How will provider response to payment incentives differ systematically by ownership form? Scant empirical evidence speaks to this issue. The framework presented here suggests that by retaining residual control rights, government stunts a public provider's incentives for innovations compared with those of a for-profit private provider. Efficiency must be lost. These stunted incentives sometimes produce the second-best outcome achievable, however. Moreover, incentives can be adjusted by payment method. A prepaid public provider may prove to be considerably less costly than a

fee-for-service private provider, with little difference in patient health outcomes. A public or nonprofit provider's responsiveness to payment will be less extreme than that of a for-profit private contractor—with less risk of overzealous cost cutting under prepayment or aggressive "demand inducement" under a fee-for-service system but also less incentive for generally efficiency-enhancing initiatives.

MULTIDIMENSIONAL QUALITY. When the multidimensionality of quality is acknowledged, the ability of patients to monitor the quality of their care becomes a significant concern. If patients can discern some aspects of quality better than others, providers have the incentive to invest primarily in those aspects of quality that patients can recognize (for example, amenities of care such as pretty waiting rooms or shorter waiting times) at the expense of those that they cannot (technical quality of care, for example). This provider behavior resembles the problem of "teaching to the test" in standards-based educational reform. Provider professionalism and altruistic concern for patients can ameliorate these inefficiencies. For example, a highly altruistic nonprofit would not exploit patients' imperfect monitorability to curb quality along less visible dimensions.⁶³

Some empirical evidence supports this conclusion. In their study of the adoption of quality-enhancing technologies by kidney dialysis units, for example, R. A. Hirth, M. E. Chernew, and S. M. Orzol find that nonprofit and for-profit facilities differed in the cost-saving trade-offs made when adopting the new technologies.⁶⁴ Nonprofits were less likely to lower technical quality of care, whereas for-profits tended to deliver lower technical quality of care but also offer more amenities (for example, more dialysis stations). This behavior is consistent with our theoretical prediction that of the three ownership forms, for-profits are most likely to respond to the incentive to exploit patients' imperfect monitorability of health services by curbing quality along less visible dimensions and promoting quality along those that are more easily observed.

COMPETITION AND SELECTION BY PATIENTS. Can consumer choice promote appropriate outcomes in the health-care marketplace? Consider, first, an ideal situation, with a homogeneous group of well-informed patients and perfect competition. Suppose that there is perfect monitorability, so that only providers offering efficient quantity and quality attract consumers. In other words, consumer choices of exit, voice, and loyalty are perfectly capable of guiding and disciplining providers to offer quality care at reasonable cost. In this case, performance under all ownership forms would tend to converge.⁶⁵

Unfortunately, such ideal conditions are rare for health services. Competition bolsters financial incentives for patient-observable quality improvement (for example, shorter waiting times) and tempers the incentive for cost-cutting measures that might damage patient-observable quality, especially among for-profit providers. Competition also bolsters the incentive to skimp on nonmonitorable dimensions of quality and to cut costs in ways that are unobservable to patients (for example, lower technical quality). The effect of competition on public and nonprofit private providers is analogous, and these incentives can conflict with the altruism or role of backstop provider often associated with these ownership forms.

These results suggest that when patients effectively monitor providers by observing and reacting to differences along all relevant dimensions (perhaps through the provider's reputation), competition for patients can have welfare-improving effects regardless of ownership form. In many cases the most effective way for a public purchaser to harness competitive forces on behalf of beneficiaries is by contracting out to competitive private providers, both investor owned and nonprofit. Yet not all health services are equally suitable for informed patient decisionmaking about treatment options.

HETEROGENEITY AND SELECTION OF PATIENTS. Even if all services could be monitored perfectly, mere competition for customers might not be efficient, because not all patients can be served equally profitably. Competition might push providers to engage in sorting and discrimination—an inefficient process known as “cream skimming” or “risk selection”—to attract those who will be served more profitably. One way to ameliorate incentives for creaming and dumping is to make selection partially contractible by adjusting prepayments—case-based, capitation, or premium payments—for observable and verifiable characteristics of enrollees (for example, age, gender, diagnoses, or past treatment expenditures). This process is known as risk adjustment. Accurate risk adjustment would allow a purchaser to contract out to competing private providers without fear of selection inefficiencies. However, risk adjustment is currently not widespread, and where it does exist it is limited in accuracy.⁶⁶ The incentives for risk selection can also be reduced by tempering payment incentives.⁶⁷

Nonprofit and public providers are not immune to incentives for profitable patient sorting. Indeed, many transitional economies have discovered their susceptibility. For example, preliminary analysis documents significant risk segmentation among competing Czech nonprofit, for-profit, and

government insurers, although to what extent this reflects a welfare loss remains a question for further research.⁶⁸ The Czech Republic was the first country in eastern Europe to implement a (simple demographic) risk adjustment system. Experience from other transitional economies suggests that selection is a concern even when virtually all insurers and providers remain government owned.⁶⁹ Such entities still have revenue concerns, especially if they face a relatively hard budget constraint; but public ownership, by retaining ultimate control in the hands of state authorities, constrains public providers in their opportunities and flexibility to engage in risk selection.⁷⁰ Attention to these issues of heterogeneity and selection is critical for accurate analysis of the distributional and efficiency effects of ownership structure and competition, not only in health-care markets but in any market in which the cost of service depends on the individual served.⁷¹

SOFT BUDGET CONSTRAINTS. An organization enjoys a soft budget constraint if some institution (such as the government) will finance its deficit, enabling it to continue to operate despite consistently exceeding its budget.⁷² Anticipation of soft budget constraints can seriously damage efficiency: a firm that expects a bailout can slack on its performance. In such a situation a purchaser that fails to impose a hard budget constraint will end up with the wrong producers or the wrong consumption bundle or both—in effect subsidizing inefficiency.

The combination of a government commitment to serve as a provider of last resort and the lack of control rights of government facility managers suggests that soft budget constraints may present particular challenges to vertically integrated government provision of services. Indeed, empirical evidence supports the view that public health-care providers face soft budget constraints. For example, in his study of the response of public, private for-profit, and nonprofit hospitals to a change in financing, Duggan finds that “the critical difference between the three types of hospitals is caused by the soft budget constraint of government-owned institutions.”⁷³

In eastern Europe, the legacy of soft budget constraints for government-owned providers continues to plague the reforming health-care systems, including newly established social insurance institutions. In several nations (Hungary and Croatia, for example), any deficit in the social insurance fund is the legal responsibility of the government. It is no surprise that this soft budget constraint has led to sustained and sizable deficits in social insurance funds in those countries, in contrast with others, such as Slovenia, that lack similar guarantees. In 1998, the Polish Finance Ministry

carried out an extensive bailout of the Polish health sector, which had amassed debts equivalent to several billion dollars.⁷⁴

The tendency of government health-care providers to operate with soft budget constraints suggests that for-profit and nonprofit private providers have a comparative advantage in providing services for which the inefficiencies of persistent refinancing of deficits outweigh the benefits of reduced incentives for both quality-damaging cost control and inefficient sorting of patients. However, it is important to note that the susceptibility of public providers to soft budget constraints does not mean that public delivery systems will generally have higher expenditures than private delivery systems; in fact, quite the opposite is true. Public providers in many contexts (for example, in several eastern European countries) must operate under a chronic shortage of funding, even if a soft budget constraint precludes closure. A vertically integrated delivery system such as the United Kingdom's National Health Service must compete with other sectors in the political arena for public revenues and is frequently associated with a lower percentage of gross domestic product (GDP) allocated to health care (see table 2-1). By contrast, contracted private providers may become adept at political lobbying for additional funding (for example, for expensive high technology), effectively softening the budget constraint on overall health spending.⁷⁵

Government Purchase and Pluralistic Delivery: Suggestive Evidence on Patterns of Comparative Advantage

To what extent do allocations of services across ownership forms in health-care delivery systems correspond to the patterns of comparative advantage suggested by the analysis presented in this chapter? This is an important area for future research. We do not attempt any formal "test" of the theory here, but we can offer some suggestive evidence that contracting out is an important policy question and that the comparative advantage framework can be a useful guide for analysis of specific health sectors.

Government Purchase of Health Care

Almost half of total spending on health services in the United States comes from public sources, and governments in most other industrialized countries finance a significantly larger percentage of health spending, if (as is

standard) compulsory social insurance contributions are counted as public financing (see table 2-1). Public funds finance more than three-fifths of total health expenditures in high-income countries.⁷⁶ The public share of health spending averages almost three-quarters in the countries of the European Monetary Union and comprises an average of 6.6 percent of gross domestic product. These averages hide significant variation in the public share of national health expenditures, even across western European nations (see table 2-2).⁷⁷

The starting point for the countries of eastern Europe before 1990 was public financing and public delivery of almost all health care, in line with the model of the Soviet Union. During the past decade of postsocialist transition, state budget financing was being replaced by compulsory social insurance, supplemented by private financing. The latter, including formal out-of-pocket payments, private insurance, and under-the-table payments, represents a small but probably underestimated share of health spending.⁷⁸

Pluralistic Delivery

Ownership structures of health sectors are diverse, though public and nonprofit providers are prevalent. In the United States, almost every segment of the health-care sector includes a mix of public, private for-profit, and private not-for-profit providers, although the mix varies considerably by medical service (see table 2-3). The private sector dominates, except for psychiatric hospitals. Nonprofits play a particularly important role in the health sector, especially for hospitals, hospices, and blood banks. For-profits represent only about 16 percent of community hospitals and account for less than 12 percent of all hospital admissions.⁷⁹ Investor-owned firms represent about two-thirds of the nursing home market and 68 percent of non-hospital-based dialysis centers.⁸⁰ For-profit organizations are also prevalent in managed care. The majority of HMO enrollees belong to for-profit organizations.⁸¹

Ownership in the U.S. health sector suggests a moderate pattern of comparative advantage. A government role in provision has been particularly strong for services with elements of a public good or with large externalities; examples include control of communicable diseases (tuberculosis and venereal diseases) and provision of substance abuse and severe mental health services, partly because of public safety concerns.⁸² Private ownership is common for services consumers can readily judge and for which they plan, such as health insurance and dental care, and for much outpatient care.

Table 2-3. *Ownership Composition of the U.S. Health Sector, Various Years, 1990-97*

Percent

Service, unit, and year	Private		Government	
	Nonprofit	For-profit	Federal	State and local
All Hospitals				
Admissions, 1997	68.1	11.8	3.7	14.0
Outpatient visits, 1997	63.4	7.9	11.7	15.2
Community hospitals				
Facilities, 1997	59.3	15.8	0	24.9
Beds, 1997	69.2	13.5	0	17.3
Admissions, 1997	72.5	12.5	0	15.0
Outpatient visits, 1997	73.4	9.1	0	17.6
Psychiatric hospitals				
Facilities, 1991	11	21		67
Beds, 1991	3	6		91
HMO enrollment, 1995	42	58		~0
PPO plans, 1995	20	80		~0
Blood bank facilities, 1990s	~100	~0		~0
Home health care				
Agencies, 1991	36.7	40.6		22.5
Clients, 1991	55.3	28.0		15.9
Nursing homes				
Homes, 1996	26.2	65.9		7.9
Beds, 1996	24.1	66.7		9.2
Hospices				
Facilities, 1991	88.1	5.0		5.4
Clients, 1991	77.6	16.1		5.9

Sources: National Center for Health Statistics, *Health, United States, 1999, with Health and Aging Chartbook* (Hyattsville, Md., 1999); for home health agencies and hospices, see the 1991 National Health Provider Inventory, as summarized in Renee Delfosse, "Hospice and Home Health Agency Characteristics: United States, 1991," *Vital and Health Statistics* (of the National Center for Health Statistics), vol. 13 (April 1995), pp. 1-33; for nursing homes, see the 1996 Nursing Home Component of the Medical Expenditure Panel Survey, as summarized in Jeffrey Rhoades, D. E. B. Potter, and Nancy Krauss, *Nursing Homes: Structure and Selected Characteristics, 1996*, MEPS Research Findings 4, AHCPR Pub. 98-0006 (Rockville, Md.: Agency for Health Care Policy and Research, 1998); for psychiatric hospital beds, see Susan Rose-Ackerman, "Altruism, Nonprofits, and Economic Theory," *Journal of Economic Literature*, vol. 34 (June 1996), pp. 701-28, table 4, p. 710; for PPOs, see Gary Claxton, Judith Feder, David Shactman, and Stuart Altman, "Public Policy Issues in Nonprofit Conversions: An Overview," *Health Affairs*, vol. 16 (March-April 1997), pp. 9-28, p. 12; for HMO enrollment, see Jon R. Gabel, "Ten Ways HMOs Have Changed during the 1990s," *Health Affairs*, vol. 16 (May-June 1997), pp. 134-45, p. 135.

Note: Numbers may not sum to 100 percent if a small "other" category cannot be attributed to one of these ownership forms. Community hospitals are short-term hospitals excluding hospital units in institutions such as prison and college infirmaries, facilities for the mentally retarded, and alcoholism and chemical dependency hospitals.

Nonprofits fall in between public and for-profit private provision, dominating in areas, such as blood banks, in which market failures are rife (in the form of asymmetry of information about the quality and safety of a donor's blood and problems of adverse selection if paying for donations) or the profit motive is symbolically objectionable (owing to a distaste for market allocation of God-given resources, such as blood).

This is not to suggest, however, that the ownership structure of the United States approximates the ideal, even the ideal understood from a comparative advantage point of view. One may wonder, for example, how appropriate it is to have for-profit organizations dominate among nursing home providers, given the vulnerability of the residents, mostly frail elderly, and hence the opportunities for unobserved quality-damaging cost cutting in the provision of this service.⁸³ For-profits have an advantage in access to capital and are much more responsive to its demands; this fact helps to explain their dominance in nursing homes (which came upon the scene quite suddenly once the government agreed to pay for their services under Medicaid and Medicare) and their general willingness to undertake transitions (for example, to eliminate surplus hospital beds).⁸⁴ Nonprofit providers will thrive only in supportive regulatory and capital market environments (for example, under the Hill-Burton federal grant program for nonprofit hospitals in the United States, a program not replicated for nursing homes).⁸⁵

In eastern Europe, private sector delivery has begun to develop, although its share of health service volume generally remains in the low single digits.⁸⁶ The pace of reforms has varied across the region, partly for ideological reasons.⁸⁷ Privatization has been most extensive for dentists and pharmacies, whereas most inpatient care is delivered by public entities (table 2-4). Entry by private providers has generally been allowed since the early 1990s, leading to the rapid growth of private individual and small group practices. A growing share of eastern European clinicians practice in both the public and private sectors.⁸⁸ Spending on private insurance is trivial except in Slovenia, where it constitutes 12 percent of total health expenditures.

Although a convergence to equilibrium in eastern Europe may take many years, the emerging ownership pattern seems to be broadly in line with comparative advantage. The private sector share has increased most markedly for those services in which patients can discern quality and make informed choices among competing providers (such as dentistry and pharmacies); public ownership continues to dominate other parts of the delivery system (such as inpatient facilities and public health services). Caution

Table 2-4. *Share of Private Health-Care Providers in Eastern Europe, 1997*
Percent

Country	Inpatient beds	Primary care physicians	Dentists	Pharmacies	Private insurance as share of total health expenditure
Bulgaria	~0	Minor	82	70	<1
Croatia	~0	Minor	96	~100	<1
Czech Republic	9.4	95	~100	~100	<1
Hungary	~0	76	40 ^a	~100 ^a	<1
Poland	~0	Minor	~100 ^a	93	<1
Romania	~0	Minor	~100	75	<1
Slovakia	~0	98	~100	100	1 ^b
Slovenia ^a	~0	14	37	68	12

Source: János Kornai and Karen Eggleston, *Welfare, Choice, and Solidarity in Transition: Reforming the Health Sector in Eastern Europe* (Cambridge University Press, 2001).

a. 1998.

b. 1995.

is warranted, however, as there is considerable historical path dependency in health sector development, and privatized delivery or financing can easily become institutionally entrenched even if it deviates considerably from principles of comparative advantage.⁸⁹

Conclusion

The distribution of public, private for-profit, and private nonprofit health-care providers in any given country reveals the tracings of history and ideology, with the evolution of ownership patterns heavily path dependent.⁹⁰ However, economic analysis of relative efficiency can and should play a role, at least in determining the comparative advantage of different ownership forms for delivery of different health services. Our application of the property rights theory of ownership to the distinctive features of health-care contracting supports the following conclusions:

—Public (or sometimes private nonprofit) providers have a comparative advantage for health services that exhibit some combination of the following

characteristics: they are hard to contract;⁹¹ they involve pure public goods or high externalities; they are not monitorable by patients, in the sense that patients can discern provider quality distortions; and they are highly susceptible to inefficient patient sorting. Examples might include care for the severely mentally ill, population-based health initiatives, blood banks, and long-term care for elderly.

—Private providers have a comparative advantage for services that combine one or more of the following features: they are readily contractible; quality is monitorable by patients (directly or through provider reputation); they are susceptible to competition; they are not amenable to dumping of unprofitable patients, or risk adjustment of payment is feasible and reasonably accurate; and incentives for rapid quality innovation are more valuable than low-powered incentives for quality-damaging cost control. Examples include elective surgery and most dental care, as well as the provision of drugs and many aspects of primary care.

—The profit status of a private provider is another key consideration. Our model supports prior analyses in the general view that nonprofits have a comparative advantage over for-profits where expensive monitoring hampers competition as a device for quality assurance and where contracting is not possible on variables critical in determining quality.⁹²

—For health care, ownership form can be important, but other factors are also critical, including competition, payment incentives, and hardness of budget constraints (for both public and private providers). How to contract out matters as much as whether, and to whom, to do so.

—The sorting of health-care facilities among ownership forms in many nations appears to a considerable extent to respect principles of comparative advantage. Factors such as history and access to capital may impede this process. Focusing on comparative advantage and policy mechanisms that facilitate its operation can be effective and beneficial.

Our analysis in this chapter has focused on health care. However, most of the principles set forth apply to a wide range of services.

Notes

1. See Oliver Hart and John Moore, "Property Rights and the Nature of the Firm," *Journal of Political Economy*, vol. 98 (1990), pp. 1119–58; Oliver Hart, *Firms, Contracts, and Financial Structure* (Oxford University Press, 1995); Oliver Hart, Andrei Shleifer, and Robert Vishny, "The Proper Scope of Government: Theory and an Application to Prisons," *Quarterly Journal of Economics* (November 1997), pp. 1127–61.

2. Oliver E. Williamson, *The Economic Institutions of Capitalism* (Free Press, 1985); Sandy Grossman and Oliver Hart, "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," *Journal of Political Economy*, vol. 94 (1986), p. 691. The incomplete contracting approach recognizes that contracts are difficult to write in sufficient detail to cover all possible contingencies, so any contract will contain gaps or ambiguities. This contract incompleteness bestows power on owners, who enjoy the right to control the relevant asset in any circumstance not explicitly delegated to others by contract. See the discussion in Hart, *Firms, Contracts, and Financial Structure*.

3. Kenneth J. Arrow, "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review*, vol. 53 (December 1963), pp. 941-73; Ching-to Albert Ma and Thomas G. McGuire, "Optimal Health Insurance and Provider Payment," *American Economic Review*, vol. 87 (September 1997), pp. 685-704.

4. David Dranove and Mark A. Satterthwaite, "The Industrial Organization of Health Care Markets," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1B (Amsterdam: Elsevier Science, North Holland, 2000), pp. 1093-139; Arrow, "Uncertainty and the Welfare Economics of Medical Care."

5. In a recent survey of fifty leading U.S. health economists, 81 percent agreed with the statement that "the primary reason for the increase in the health sector's share of GDP over the past 30 years is technological change in medicine" (Victor R. Fuchs, "Economics, Values, and Health Care Reform," *American Economic Review*, vol. 86 [March 1996], pp. 1-24, p. 227).

6. Richard Zeckhauser, "Directed Goods," memorandum, May 1990, Harvard University, John F. Kennedy School of Government.

7. The redistribution, of course, need not go to the poor. The monies could go to the schools, helping the young; to hospital services, helping the sick; or to "high culture," providing benefits to artistically inclined consumers—who are disproportionately represented among high-income individuals. Ordinary income transfers are a special and important case of directed goods.

8. Twenty-nine members in 1999, at the time the data for table 2-1 were published. The Slovak Republic became the thirtieth member in September 2001.

9. Drawing upon the experiences of the 191 member countries of the World Health Organization, the report emphasizes the importance of strategic purchasing, payment incentives, and risk pooling and discusses the organization of health service delivery without explicitly attending to, or making recommendations regarding, public versus private ownership. The WHO's assessment system is based on five indicators: the overall level of population health, health disparities within the population, the overall level and the overall distribution of health system responsiveness (including patient satisfaction), and the distribution of the health system's financial burden within the population (World Health Organization, *World Health Report 2000, Health Systems: Improving Performance* [Geneva, 2000]).

10. The poor showing of the United States is attributable to low ratings on some measures—for example, equity in distribution of health status and fairness of financial contribution—despite advanced medical capabilities and high health expenditures.

11. See, for example, Robert Blendon, Minah Kim, and John M. Benson, "The Public versus the World Health Organization on Health System Performance," *Health Affairs*, vol. 20, no. 3 (2001), pp. 10-20.

12. Private employers may place a higher value on cost control than does the government, or they may be less concerned about access and inefficient sorting of patients (because they can "free ride" on public insurance programs and may wish to attract or retain only relatively healthy employees). An employer might also wish to encourage an employee to seek coverage through a spouse's employer (David Dranove, Kathryn E. Spier, and Laurence Baker, "Competition' among Employers Offering Health Insurance," *Journal of Health Economics*, vol. 19, no. 1 [2000], pp. 121-40).

13. For example, "yardstick competition" among ownership forms provides valuable information to the purchaser as well as incentives for the providers, as we discuss briefly under the section on competition for patients. A purchaser may find having a mixed for-profit and nonprofit hospital sector useful for measuring the amount of community benefits a nonprofit should provide to justify tax exemption (see Sean Nicholson, Mark V. Pauly, Lawton R. Burns, Agnieszka Baumritter, and David A. Asch, "Measuring Community Benefits Provided by For-Profit and Nonprofit Hospitals," *Health Affairs*, vol. 19, no. 6 [2000], pp. 168-77). R. A. Hirth, "Consumer Information and Competition between Nonprofit and For-Profit Nursing Homes," *Journal of Health Economics*, vol. 18, no. 2 (1999), pp. 219-40, emphasizes quality spillovers from nonprofits operating in mixed industries. A mix of public and private providers may also be important for issues of legal accountability; John L. Akula, "Sovereign Immunity and Health Care: Can Government Be Trusted?" *Health Affairs*, vol. 19, no. 6 (2000), pp. 152-67, suggests that "when government is regulator and a major player but the delivery system is primarily private, accountability at the point of delivery remains high. The 'tone' of the relatively small public delivery system is perhaps best maintained by the spillover of standards and expectations shaped by the private system" (p. 165). This latter point is closely related to professionalization and normative pressures for institutional isomorphism (Paul J. DiMaggio and Walter W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," *American Sociological Review*, vol. 48, no. 2 [1983], pp. 147-60).

14. Frank A. Sloan, "Not-for-Profit Ownership and Hospital Behavior," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1B (Amsterdam: Elsevier Science, North Holland, 2000), pp. 1141-74.

15. E. B. Keeler, L. V. Rubenstein, K. L. Kahn, D. Draper, E. R. Harrison, M. J. McGinty, W. H. Rogers, and R. H. Brook, "Hospital Characteristics and Quality of Care," *Journal of the American Medical Association*, vol. 268, no. 13 (1992), pp. 1709-14.

16. Laura A. Peterson, Sharon-Lise T. Normand, Jennifer Daley, and Barbara McNeil, "Outcome of Myocardial Infarction in Veterans Health Administration Patients as Compared with Medicare Patients," *New England Journal of Medicine*, vol. 343 (December 28, 2000), pp. 1934-41.

17. Sloan, "Not-for-Profit Ownership and Hospital Behavior."

18. To what extent knowledge itself constitutes a community benefit (as opposed to a broader public good) is less clear.

19. For example, Medicare Payment Advisory Commission (MedPAC), "A Data Book on Hospital Financial Performance," in *Report to the Congress: Selected Medicare Issues*, June 2000, appendix C, pp. 175-92 (available at www.medpac.gov [August 1, 2001]), reports that the ratio of uncompensated care to cost in 1998 was 9.8 percent for urban government hospitals and 4.7 percent for rural government hospitals, compared with 4.5 percent for voluntary and 4.2 percent for proprietary hospitals (p. 190). The largest single category for

provision of uncompensated care is public major teaching hospitals (12 percent, compared with 5 percent for private major teaching hospitals).

20. Richard Zeckhauser, Jayendu Patel, and Jack Needleman, *The Economic Behavior of For-Profit and Nonprofit Hospitals: The Impact of Ownership on Responses to Changing Reimbursement and Market Environments*, report prepared for the Robert Wood Johnson Foundation (Harvard University, John F. Kennedy School of Government, March 1995), p. 107.

21. Janet Currie and John Fahr, "Managed Care and Hospital Provision of Charity Care: The Case of California," *RAND Journal of Economics* (forthcoming, 2002). Looking at charity care provided by California hospitals between 1988 and 1996, Currie and Fahr find that in response to higher managed-care penetration, public hospitals end up with higher shares of uninsured patients and higher fractions of the charity caseload admitted from the emergency room (suggesting sicker patients).

22. Jack Needleman, Deborah J. Chollet, and Joann Lamphere, "Uncompensated Care and Hospital Conversions in Florida," *Health Affairs*, vol. 18, no. 4 (1999), pp. 125–33. The authors studied hospital conversions in Florida between 1981 and 1996. After controlling for year, number of beds, teaching status, and metropolitan location, they find that public hospitals had substantially higher levels of uncompensated care than their private counterparts, and privatization to for-profit status of four public hospitals led to a large decline in uncompensated care. Kamal Desai, Carol VanDeusen Lukas, and Gary J. Young, "Public Hospitals: Privatization and Uncompensated Care," *Health Affairs*, vol. 19, no. 2 (2000), pp. 167–72, examines care in fifty-two privatized hospitals in three states (California, Florida, and Texas) between 1981 and 1995 (fifteen were changed to for-profit status and thirty-seven to nonprofit status). They find that "public hospitals that privatized provided significantly less uncompensated care before privatization than did other public hospitals, both before and after privatization," suggesting some sorting by ownership form; "public hospitals that converted to nonprofit status generally sustained their levels of uncompensated care," but "public hospitals that converted to for-profit status showed a significant decline in the level of uncompensated care they provided" (p. 170).

23. Bradford H. Gray, "Conversions of HMOs and Hospitals: What's at Stake?" *Health Affairs*, vol. 16, no. 2 (1997), pp. 29–47, p. 40.

24. Elaine Silverman and Jonathan Skinner, "Are For-Profit Hospitals Really Different? Medicare 'Upcoding' and Market Structure," *RAND Journal of Economics* (forthcoming, 2002).

25. For example, the largest U.S. hospital company, the for-profit Healthcare Company (HCA), will pay criminal and civil penalties totaling more than \$800 million for submitting inflated bills to the government and paying kickbacks to doctors for referrals (Kurt Eichenwald, "HCA to Pay \$95 Million in Fraud Case," *New York Times*, December 15, 2000).

26. Some studies suggest that nonprofits provide community benefits in excess of the value of their tax exemptions, but there are wide variations, and "if [for-profits were to] include the amount of tax they pay as community benefits, they generally would be found to provide more community benefits than [nonprofits]" (David Shactman and Stuart H. Altman, "The Impact of Hospital Conversions on the Healthcare Safety Net," in Stuart Altman, Uwe Reinhardt, and Alexandra Shields, eds., *The Future U.S. Healthcare System:*

Who Will Care for the Poor and Uninsured? [Chicago: Health Administration Press, 1998], pp. 189–206, 199). Other recent studies find nonprofits seem to be falling short of expected levels of community benefits (Nicholson et al., “Measuring Community Benefits Provided by For-Profit and Nonprofit Hospitals”).

27. DiMaggio and Powell, “The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields”; Edward C. Norton and Douglas O. Staiger, “How Hospital Ownership Affects Access to Care for the Uninsured,” *RAND Journal of Economics*, vol. 25 (Spring 1994), pp. 171–85; for discussion of the latter point, see, for example, Shactman and Altman, “The Impact of Hospital Conversions on the Healthcare Safety Net.”

28. See, for example, Mark V. Pauly, “Nonprofit Firms in Medical Markets,” *AEA Papers and Proceedings*, vol. 77 (May 1987), pp. 257–62; Frank A. Sloan, G. A. Picone, D. H. Taylor Jr., and S.-Y. Chou, “Hospital Ownership and Cost and Quality of Care: Is There a Dime’s Worth of Difference?” *Journal of Health Economics*, vol. 20, no. 1 (2001), pp. 1–21; Susan L. Ettner and Richard C. Hermann, “The Role of Profit Status under Imperfect Information: Evidence from the Treatment Patterns of Elderly Medicare Beneficiaries Hospitalized for Psychiatric Diagnoses,” *Journal of Health Economics*, vol. 20, no. 1 (2001), pp. 23–49.

29. Zeckhauser, Patel, and Needleman, *The Economic Behavior of For-Profit and Nonprofit Hospitals: The Impact of Ownership on Responses to Changing Reimbursement and Market Environments*.

30. Daniel P. Kessler and Mark B. McClellan, “The Effects of Hospital Ownership on Medical Productivity,” *RAND Journal of Economics* (forthcoming, 2002).

31. David Blumenthal and Joel S. Weissman, “Selling Teaching Hospitals to Investor-Owned Hospital Chains: Three Case Studies,” *Health Affairs*, vol. 19, no. 2 (2000), pp. 158–66. In this study of three teaching hospitals sold to investor-owned hospital chains, the authors find, for example, no measurable adverse impact of the ownership change on the hospitals’ social missions, including teaching, research, and indigent care.

32. *Ibid.*, p. 158.

33. Sloan, “Not-for-Profit Ownership and Hospital Behavior,” p. 1168.

34. For simplicity, we abstract from the multiple layers of relationships between principal and agent within the delivery institution, although similar incentive and contracting problems are likely to arise between each layer (for example, between a health plan and its physicians).

35. The statement is qualified because our model of nonprofits does posit a different preference structure, albeit with for-profit preferences as a special case.

36. B. R. Klein and Armen A. Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” *Journal of Law and Economics*, vol. 21, no. 2 (1978), pp. 297–326.

37. See, for example, the pioneering work of Joseph P. Newhouse, “Toward a Theory of Nonprofit Institutions,” *American Economic Review*, vol. 60 (March 1970), pp. 64–74. More recently, Randall Ellis, “Creaming, Skimping, and Dumping: Provider Competition on the Intensive and Extensive Margins,” *Journal of Health Economics*, vol. 17, no. 5 (1998), pp. 537–55, analyzes the incentive for competing hospitals to “dump” unprofitable patients by assuming that hospitals dump patients in relation to overall hospital profitability (not the profitability of individual patients) and must reach a minimum level of profit. Such a hos-

pital would exhibit a kinked indifference curve, with extreme reluctance to incur costs beyond the break-even point.

38. See Hart, Shleifer, and Vishny, "The Proper Scope of Government: Theory and an Application to Prisons."

39. This may be in part a function of the government budgeting process, wherein money G saves by coming in under budget one year is usually returned to the treasury. Although multiyear budgeting may help to alleviate the loss of cost control incentives associated with this phenomenon (as Guy Stuart has suggested), lack of longer-term control rights for government managers seems to be a fundamental characteristic of public sector provision.

40. Note that the fidelity of G arises from lack of control rights, not from an assumption of innately differing preferences.

41. The empirical literature is briefly reviewed in the previous discussion on performance differences by ownership type. Commenting on quality, the General Accounting Office notes in a report to Congress that the "VA was slow to take advantage of changes in medical technology"; assessing cost reduction, the General Accounting Office observes that "between 1975 and 1995, the number of community hospitals decreased by about 12 percent. During the same 20-year period, VA did not close any hospitals because of declining utilization" (*VA Hospitals: Issues and Challenges for the Future*, GAO/HEHS-98-32 [U.S. General Accounting Office, April 1998], pp. 5-6).

42. See Hart, Shleifer, and Vishny, "The Proper Scope of Government: Theory and an Application to Prisons."

43. See, for example, Burton A. Weisbrod, *The Voluntary Non-Profit Sector: Economic Theory and Public Policy* (Lexington, Mass.: Lexington Books, 1977); Henry Hansmann, "The Role of Non-Profit Enterprise," *Yale Law Journal*, vol. 91 (November 1980), pp. 54-100; and Susan Rose-Ackerman, "Altruism, Nonprofits, and Economic Theory," *Journal of Economic Literature*, vol. 34 (June 1996), pp. 701-28.

44. See, for example, Newhouse, "Toward a Theory of Nonprofit Institutions"; Mark V. Pauly and Michael Redisch, "The Non-Profit Hospital as a Physician Cooperative," *American Economic Review*, vol. 63 (March 1973), pp. 87-100; Sloan, "Not-for-Profit Ownership and Hospital Behavior."

45. Hart, *Firms, Contracts, and Financial Structure*.

46. In many nonprofits, it is not clear who the principals are; the obvious candidates include the board, employees, donors, and clients.

47. Hansmann, "The Role of Non-Profit Enterprise."

48. See, for example, Newhouse, "Toward a Theory of Nonprofit Institutions."

49. Moral hazard refers to the tendency of (typically well-insured) patients and their providers to utilize medical services even if the health improvement benefit they offer does not justify their cost.

50. The nonprofit label in fact may constitute a social loss, in that society forgoes the services that could be purchased with tax revenues from the nonprofit, and the nonprofit, by avoiding taxes, may gain an unfair market advantage over for-profit competitors.

51. Mark G. Duggan, "Hospital Market Structure and the Behavior of Not-for-Profit Hospitals: Evidence from Responses to California's Disproportionate Share Program," Working Paper 7966 (Cambridge, Mass.: National Bureau of Economic Research, October 2000).

52. Richard Arnold, Marianne Bertrand, and Kevin F. Hallock, "Does Managed Care Change the Mission of Nonprofit Hospitals? Evidence from the Managerial Labor Market," *RAND Journal of Economics* (forthcoming, 2002).

53. Silverman and Skinner, "Are For-Profit Hospitals Really Different? Medicare 'Upcoding' and Market Structure."

54. Arrow, "Uncertainty and the Welfare Economics of Medical Care."

55. Monitorable and prestigious aspects of quality are often associated with technology, such as magnetic resonance imaging (MRI) machines and other cutting-edge equipment, rather than lower-tech aspects, such as time spent interpreting tests for each patient.

56. These issues are discussed in considerably more detail in Karen Eggleston and Richard Zeckhauser, "Ownership and Purchase of Health Care: An Incomplete Contracting Approach," Harvard University, John F. Kennedy School of Government, April 1, 2001, mimeographed.

57. See discussion in Thomas G. McGuire, "Physician Agency," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1A (Amsterdam: Elsevier Science, North Holland, 2000), pp. 461–536; and David M. Cutler and Richard J. Zeckhauser, "The Anatomy of Health Insurance," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1A (Amsterdam: Elsevier Science, North Holland, 2000), pp. 563–643.

58. Ulf G. Gerdtham and Bengt Jönsson, "International Comparisons of Health Expenditure: Theory, Data, and Econometric Analysis," in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1A (Amsterdam: Elsevier Science, North Holland, 2000), pp. 11–53.

59. Cutler and Zeckhauser, "The Anatomy of Health Insurance," table 7.

60. Alexander Preker and Richard Feacham, "Market Mechanisms and the Health Sector in Central and Eastern Europe," Technical Paper 293 (World Bank, February 1996), p. 35.

61. Jorgen Marree and Peter Groenewegen, *Back to Bismarck: Eastern European Health Care Systems in Transition* (Aldershot, England: Avebury, Ashgate Publishing, 1997), p. 64.

62. Thomas A. Massaro, Jiri Nemeč, and Ivan Kalman, "Health System Reform in the Czech Republic: Policy Lessons from the Initial Experience of the General Health Insurance Company," *Journal of the American Medical Association*, vol. 271 (June 15, 1994), pp. 1870–74.

63. Indeed, a "perfectly altruistic" provider might choose the same package of quality innovations among services that it would choose if there were perfect monitoring by patients. Such an outcome would be infeasible if losing patients to competing providers would compromise the nonprofit's viability.

64. R. A. Hirth, M. E. Chernew, and S. M. Orzol, "Ownership, Competition, and Adoption of New Technologies and Cost-Saving Practices in a Fixed Price Environment," *Inquiry*, vol. 37 (Fall 2000), pp. 282–94.

65. Albert O. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Harvard University Press, 1970).

66. Patricia Seliger Keenan, Melinda J. Beeuwkes Buntin, Thomas G. McGuire, and Joseph P. Newhouse, "The Prevalence of Formal Risk Adjustment in Health Plan Purchasing," *Inquiry*, vol. 38 (Fall 2001), pp. 245–59.

67. Examples include extra payment for high-cost conditions or treatments and fee-for-service reimbursement for a share of all patients' expenditures (see Joseph P. Newhouse, "Reimbursing Health Plans and Health Providers: Efficiency in Production versus Selection," *Journal of Economic Literature*, vol. 34 [September 1996], pp. 1236–63).

68. Ágnes Benedict, "A Cseh Egészségügyi Reformról" (On the reform of the health sector in the Czech Republic), *Egészségügyi Gazdasági Szemle*, vol. 38 (2000), pp. 83–98.

69. For example, anecdotal evidence indicates that fixed payment systems have led providers in China to refer costly patients elsewhere: "administrators of a primary hospital openly admitted that they refused admission to patients who were seriously ill and referred them to secondary and tertiary hospitals" (Winnie Yip and William Hsiao, "Medical Savings Accounts: Lessons from China," *Health Affairs*, vol. 16, no. 6 [1997], pp. 244–51, p. 249).

70. In the United States, for example, "both VA's strategic goals and the incentives it is creating through some of its restructuring efforts suggest that VA, like many community hospitals, is focusing its marketing efforts on attracting revenue-generating patients" (*VA Hospitals: Issues and Challenges for the Future*, p. 5). Congressional concerns that the VA was not appropriately maintaining its level of certain high-cost specialized services—such as treatment for spinal cord dysfunction, blindness, amputation, and severe mental illness—fostered legislation to ensure that the volume of these services did not decline below 1996 levels (see the statement for the record by Stephen P. Backus, director of veterans' affairs and military health care issues, Health, Education, and Human Services Division, in *Veterans' Affairs: Progress and Challenges in Transforming Health Care*, GAO/Y-HEHS-99-109 [U.S. General Accounting Office, April 15, 1999], p. 13).

71. An analogy can be drawn to educational policy, in which concerns regarding market sorting—by student ability and income, similar to patient sorting—gives pause to policymakers otherwise eager to harness the benefits of privatization and competition—through vouchers, for example—to increase productivity, choice, accountability, and quality.

72. János Kornai, *Economics of Shortage* (Amsterdam: Elsevier Science, North Holland, 1980); János Kornai, "The Softness of the Budget Constraint," *Kyklos*, vol. 39, no. 1 (1986), pp. 3–30; János Kornai, "Legal Obligation, Non-compliance, and Soft Budget Constraint," in Peter Newman, ed., *New Palgrave Dictionary of Economics and the Law* (New York: Macmillan, 1998), pp. 533–39; Eric S. Maskin, "Theories of the Soft Budget Constraint," *Japan and the World Economy*, vol. 8, no. 2 (1996), pp. 125–33.

73. Mark G. Duggan, "Hospital Ownership and Public Medical Spending," *Quarterly Journal of Economics* (November 2000), pp. 1343–73, p. 1343. See Karen Eggleston, Nolan Miller, and Richard Zeckhauser, "Ownership Structure and Provider Behavior," paper prepared for the 2001 conference of the International Health Economics Association, York, England, July 25, 2001, p. 1343, for a theoretical model of provider behavior that explicitly includes the phenomenon of the soft budget constraint.

74. János Kornai and Karen Eggleston, *Welfare, Choice, and Solidarity in Transition: Reforming the Health Sector in Eastern Europe* (Cambridge University Press, 2001).

75. Robert Blendon and Minah Kim, "Comments on the Eggleston and Zeckhauser Paper on Government Contracting for Health Care," Harvard University, John F. Kennedy School of Government, June 2001, mimeographed.

76. High-income countries are those whose per capita income in 1998 exceeded roughly nine thousand dollars.

77. Ideological factors presumably play a large role in determining this variation. There is little correlation between total health spending and the public share—that is, between the first and second columns of table 2-1 (a correlation coefficient of 0.01). There is a more significant, and negative, correlation between public share of financing and private share of inpatient beds (-0.4); we omit the United States in both calculations because it is an extreme outlier. János Kornai and John McHale analyze the trends in public financing of health expenditures in OECD countries from the 1970s to the 1990s. Their fixed-effect model finds significantly positive relationships among per capita public health expenditure, income, and the elderly share of the population. Although the public share has been fairly stable, this consistency hides conflicting trends—an increasing public sector role, associated with aging populations, offset by a decreasing time trend, which the authors speculate reflects “a long-lasting attempt to shrink the welfare state” (Kornai and John McHale, “Income, Technology, or Demographics? An Accounting for Trends in International Health Spending,” Harvard University, Department of Economics, July 1999, p. 17).

78. Semilegal “gratuity” payments to physicians are both prevalent and of significant magnitude, especially in Hungary, Romania, Poland, and Bulgaria (see Kornai and Eggleston, *Welfare, Choice, and Solidarity in Transition: Reforming the Health Sector in Eastern Europe*). Including such payments would increase doctors’ incomes by 100 percent or more in Poland (Mukesh Chawla, Tomasz Tomasiak, Marzena Kulis, Adam Windak, and Deirdre A. Rogers, “Enrollment Procedures and Self-selection by Patients: Evidence from a Family Practice in Krakow, Poland,” Discussion Paper 66 [Harvard University, School of Public Health, 1999]) and by 150 percent in Hungary (Géza Bognár, Róbert Iván Gál, and János Kornai, “Hálapénz a Magyar Egészségügyben” [Gratuity money in the Hungarian health sector], *Közgazdasági Szemle*, vol. 47 [April 2000], pp. 293–320), and even these estimates are likely to be conservative. The prevalence of under-the-table payments is consistent with health care as a directed good, one for which the government pays but a single individual is the overwhelming beneficiary. Given this property, it is to be expected that individuals will wish to voice their preferences and that some governments will grant them latitude, even if they speak through semilegal or illegal payments.

79. “If one includes the approximately 400 psychiatric, alcohol and chemical dependency, and rehabilitation hospitals owned by for-profit companies and the 350 nonprofit and public hospitals that these companies manage, the [for-profit] sector accounts for almost 32 percent of U.S. nonfederal hospitals and approximately 23 percent of the beds” (Bradford H. Gray, “Hospital Ownership Form and Care for the Uninsured,” in Stuart Altman, Uwe Reinhardt, and Alexandra Shields, eds., *The Future U.S. Healthcare System: Who Will Care for the Poor and Uninsured?* [Chicago: Health Administration Press, 1998], pp. 207–22, p. 208).

80. MedPAC, “A Data Book on Hospital Financial Performance,” p. 137.

81. Although table 2-3 lists the public share of HMOs as -0 percent, there are public managed-care organizations, if initiatives of the Department of Defense and some other public purchasers are counted.

82. Richard G. Frank and Thomas G. McGuire, “Economics and Mental Health,” in Anthony J. Culyer and Joseph P. Newhouse, eds., *Handbook of Health Economics*, vol. 1B (Amsterdam: Elsevier Science, North Holland, 2000), pp. 893–954.

83. Hansmann, "The Role of Non-Profit Enterprise."

84. Hirth, "Consumer Information and Competition between Nonprofit and For-Profit Nursing Homes." "Areas in which demand is growing rapidly are likely to have high for-profit market shares because the capital market constraints faced by [nonprofits] make rapid expansion difficult" (p. 235). Hirth therefore suggests using demand growth in a market as an instrumental variable for for-profit market share when studying ownership effects.

85. We are grateful to Robert Blendon and Minah Kim for this point.

86. Blendon and Kim, "Comments on the Eggleston and Zeckhauser Paper on Government Contracting for Health Care."

87. In some cases—primary care, dental and outpatient specialist practices in the Czech Republic, and individual practices in Slovakia and Croatia—privatization campaigns have specified deadlines for privatization of providers in certain categories.

88. For example, according to a survey conducted in Krakow (Chawla et al., "Enrollment Procedures and Self-selection by Patients: Evidence from a Family Practice in Krakow, Poland," p. 10), 1,096 specialists employed in the public sector also spent an average of 10.8 hours a week on private practice.

89. One example is the U.S. Medigap system of supplementary private insurance for Medicare, a system that has high administrative costs and would be more appropriately included in Medicare yet is politically and institutionally difficult to change. We are grateful for Joseph Newhouse for this point.

90. Eastern European countries, for example, are likely to continue to see a larger presence of state ownership in the health sector than economies that were never socialist.

91. For some goods and services, "the government cannot fully anticipate, describe, stipulate, regulate, and enforce exactly what it wants" (Andrei Shleifer, "State versus Private Ownership," *Journal of Economic Perspectives*, vol. 12, no. 4 [1998], pp. 137).

92. Hansmann, "The Role of Non-Profit Enterprise."