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CONTRACTING OUT: THEORY AND POLICY

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Abstract

This article examines the generalization that contracting out of government services to private firms increases economic efficiency and reduces the costs of government operations. Since the economic reasons underlying contracting out are rarely spelled out and the evidence favoring contracting out is hardly conclusive, I search for the elusive economic rationale. It eludes me, too. Indeed, contracting out may be far more expensive than even inefficient government operations given contingent contracting and opportunistic private sector behavior that mandates monitoring. It certainly will be a poorer alternative than efficient government delivery of services (not an oxymoron!). I conclude that while economic reasoning cannot explain the current popularity of contracting out, when reforming government delivery is unlikely and contracting costs are low, contracting out will prove more efficient than the status quo.

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CONTRACTING OUT: THEORY AND POLICY

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I. Introduction

The worldwide march toward privatization is one response to the almost universal frustration with deficit government budgets and the inefficiency of government operations. Contracting out can partially resolve both issues without the political, social, and economic challenges that accompany more drastic forms of privatization such as divestiture. The flow of red ink can be stemmed by turning over some government activities to private sector organizations. Simultaneously, contracting out replaces less efficient government operations with more efficient private ones. These assertions are consistent with the literature that indicates the cost savings brought about by contracting out in the U.S. both at the federal and the local level.¹ Indeed, President Reagan's 1987 Executive Order setting up an Office of Privatization in the Office of Management and Budget and the subsequent enforcement of

¹ See, for example, President's Commission on Privatization (Linowes Commission), Report (Washington, D.C.: U.S. Government Printing Office, 1988), Chapter 8; Roger L. Kemp (ed.), Privatization: The Provision of Public Services by the Private Sector (Jefferson, NC: McFarland, 1991); Joan W. Allen, et. al., The Private Sector in State Service Delivery: Examples of Innovative Practices (Washington, D.C.: The Urban Institute Press, 1989); and Lawrence K. Finley (ed.), Public Sector Privatization: Alternative Approaches to Service Delivery (New York: Quorum Books, 1989).

Circular A-76 by OMB imposed contracting out on all executive departments and agencies.² And although the privatization efforts of the Bush administration appear to be less intense than under Mr. Reagan,³ the budgetary pressures at the state and local levels have energized contracting out efforts in these precincts.

Contracting out activities have been carried out most extensively in the United States.⁴ Still, governments in both the developed and developing world have not neglected this method of ameliorating fiscal difficulties. The British Treasury in late 1991 issued a white paper that outlined the substantial degree of contracting out implemented both by central government and by the local authorities and indicated the intent of the government to proceed further.⁵ The infrastructure of France's water supply has for decades been owned by the public sector, but water is supplied by private sector companies, a practice that has been copied in francophone Africa.

In the developing world, contracting out has often taken the form of management contracts. Typically, a multinational corporation manages a government-owned company, relieving the ministry or agency of its operational responsibility. Examples of such contracts

² The text of the 1983 circular may be found in John Sherrod (ed.), Privatization: A Sourcebook (Detroit: Omnigraphics, 1989), pp. 21 - 30. A-76 was originally issued in 1966 and revised a number of times. It was the 1983 version that was assiduously pursued by the Reagan administration OMB.

³ For example, the Office of Privatization was eliminated by the Bush team.

⁴ John D. Donahue distinguishes between strategic and tactical privatization. The former is independent of efficiency; it is aimed at reducing the role of government in the economy. The latter is designed to increase efficiency. See his The Privatization Decision: Public Ends, Private Means (New York: Basic Books, 1989), p. 136. I am concerned here only with the latter.

⁵ Competing for Quality: Buying Better Public Services (London: Her Majesty's Stationary Office, 1991), CM 1730.

can be found in Nigeria (airlines), Sri Lanka (textile mills), the Sudan (sugar plantations), Botswana (telephone service), and Malaysia (port container terminal).⁶ Nevertheless, contracting out of public services such as road maintenance is not uncommon.⁷

Contracting out to reduce the government's deficit and improve efficiency relies on 2 underlying presumptions. First, a meaningful distinction exists between government *provision* of certain functions and government *production* of those same functions. Thus, a local government's desire to provide library services does not imply that the municipality engage librarians on the communal payroll. Second, contracting out presumes that private sector production is more efficient than public sector production. The literature, however, is virtually silent on the sources of those efficiencies.⁸ More to the point, despite the numerous assertions and even evidence that contracting out reduces government costs, a thorough economic analysis of contracting out as an efficiency enhancer remains elusive. Empirical evidence is even more scarce, and the few published studies are subject to serious reservations.

⁶ See V.V. Ramanadham, "Privatisation: The U.K. Experience and Developing Countries," in *idem.* (ed.) Privatisation in Developing Countries (London: Routledge, 1989), p. 53; L. Gray Cowan, Privatization in the Developing World (New York: Greenwood Press, 1990), p. 75; and Helen Nankani, Techniques of Privatization of State-Owned Enterprises, Volume II: Selected Country Case Studies, Technical Paper Number 89 (Washington, D.C.: World Bank, 1988), p. 63.

⁷ See, for example, Clell Harral, Ernesto Henriod, and Peter Graziano, An Appraisal of Highway Maintenance by Contract in Developing Countries (Washington, D.C.: The World Bank, 1985) and Gabriel Roth, The Private Provision of Public Services in Developing Countries (Oxford: Oxford University Press, 1987).

⁸ Three notable exceptions are John A. Rehfuss, Contracting Out in Government: A Guide to Working with Outside Contractors to Supply Public Services (San Francisco: Jasssey-Bass, 1989), pp. 18 - 24, Donahue, Chapter 4, and especially James Ferris and Elizabeth Graddy, "Production Costs, Transaction Costs, and Local Government Contractor Choice," Economic Inquiry 29 (July 1991), pp. 541 - 554. See also their "Contracting Out: For What? For Whom?" Public Administration Review, 46, no. 4 (July/August 1986), pp. 332 - 344.

The first task of this paper, then, is to understand the efficiencies likely to arise when work is contracted out or, alternatively, the inefficiencies of government production. It will become clear that faith in the superiority of private supply depends upon the options considered.⁹ Both theory and the existing evidence suggest that contracting out will be more efficient than government in certain circumstances. Often, contracting out can be superior to government doing business as usual. "Doing business as usual," however, need not be a permanent state. Contracting out is not necessarily less costly than *efficient* government operations. Finally, even when contracting out is more cost-effective when measured on the basis of straightforward service delivery, that conclusion may be reversed when providing for the government's costs of instituting an effective contracting-out mechanism. In some instances, for example, the added costs of proper monitoring will outweigh the production savings gained by contracting out.

Hence, the second purpose of this article: Specifying when to contract out and when to maintain production in house. In essence, the policy issue is not strictly economic, but political as well. Will appropriate reforms be made by the government authorities or will they chose to contract out as the more expedient political resolution? But even if the decision to contract out is not based on efficiency grounds, surely the authorities ought to understand

⁹ In a refreshing book, David Osborne and Ted Gaebler, Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector (Reading, Mass: Addison-Wesley, 1992) take a non-ideological approach to privatization that is identical to my approach here. They argue that the function of government is to govern, and that "[t]hose who advocate [privatization] on ideological grounds -- because they believe business is always superior to government -- are selling the American people snake oil." (p. 45.) Their criteria for private versus public provision, however, are broader than that addressed in this article. Osborne and Gaebler follow the excellent monograph of James O. Wilson, Bureaucracy: What Government Agencies Do and Why They Do It (New York: Basic Books, 1989) in suggesting that government should be concerned with "effectiveness, efficiency, equity, [and] accountability." (p. 47; Wilson, p. 316 lists accountability, equity, fiscal integrity, and efficiency.) My concern is solely with the efficiency criterion.

the full costs of their decisions. And since contracting out is likely to be a piecemeal process, policymakers might be convinced to contract out last those functions that are most costly.

The substance of this article begins in section II by considering a typical firm's choices when deciding between using outside suppliers or in-house production. Clearly, firm expansion, whether by internal growth or integration, faces limits. At some point in-house production is not efficient. This conclusion leads to the economics of contracting out in the third section, including a discussion of monitoring costs. Section IV analyzes the specific arguments used to justify contracting out by governments, and suggests that the case made is far from convincing. I propose in section V that the actual advantages of contracting out are more likely to be political than economic. Furthermore, I elaborate there on the costs of contracting out, which appear to have been ignored for the most part. Section VI concludes by suggesting some fundamental criteria when the authorities opt to contract out government services to the private sector.

II. The Economics of In-House Production

Contracting out is not an exercise limited to government departments, agencies, or enterprises. It is endemic to the organization of production and sales, and so applies with equal force to the private firm.¹⁰ This claim can be most easily justified by noting that contracting out is merely the reverse of contracting in or "internalizing." In the latter, the firm or organization performs operations in shop that previously were done elsewhere. When a business or non-profit agency contracts out, it reverses the process by "outsourcing" or

¹⁰ The Wall Street Journal (September 11, 1991) reported on such industrial giants as DuPont, Eastman Kodak, and Mobil, among others, that had contracted out project engineering, computer-support services, and refinery maintenance, respectively.

doing elsewhere that which had previously been attended to in shop. Consequently, the economics of contracting out might best be approached by first understanding the benefits and disadvantages of contracting in.

Put this way, the contracting out issue is closely linked to the literature on the limits to firm size now associated with Coase¹¹ and elaborated more recently in the transaction-cost approach to organizational structure by Williamson.¹²

The single employee firm

Consider the simplest firm, the ultimate middleman. The only employee is the single proprietor, who takes and places orders by telephone -- which constitutes the only capital expense -- and relays those orders to the appropriate producer/distributor. The latter ships the ordered merchandise directly to the purchaser. This hypothetical entrepreneur has outsourced not only manufacturing, but also distribution. All other costly functions such as record keeping, tax preparation, legal affairs, etc. are also farmed out.

The underlying economic rationale for this form of business organization is specialization and the division of labor. The middleman takes advantage of the supplier economies that enable each producer and distributor to be most efficient in its own specialty. Thus, this single proprietorship epitomizes a firm that, in Williamson's terms, is fully

¹¹ Ronald Coase, "The Nature of the Firm," *Economica* iv (1937), pp. 386 - 405. This article has been reproduced in many compilations, among them Oliver E. Williamson and Sidney G. Winter (eds.), The Nature of the Firm: Origins, Evolution, and Development (New York: Oxford University Press, 1991), pp. 18 - 33. Page references in this paper are keyed to the Williamson-Winter book.

¹² Reference to his works, unless otherwise noted, is to the compilation of articles in Oliver E. Williamson, Economic Organization: Firms, Markets and Policy Control (New York: New York University Press, 1986).

organized on the market principle rather than hierarchically.¹³

Firm expansion and the economies of scale and scope

The entrepreneur might well stop here; the present organization may generate maximum profits. It is not inconceivable, however, that conditions justify expansion, which might warrant organizational change as well. Economists, when thinking about in-house versus external supply, are likely to examine first the likelihood of economies of scale or scope. When some aspect of the firm's operations enable it to take advantage of economies of scale, relying on outside service providers may no longer be the most economical method of production.

Economies of scale and scope are typically analyzed in conjunction with the production side of the firm. But other types of cost-reducing measures also vary with the scale and scope of the firm, and they, too, commend themselves as causes of internalizing. Indeed, E.A.G. Robinson in his classic The Structure of Industry rejected production technology as the limiting element in determining maximum firm size. He viewed the optimal structure of the firm as defined by management, financial, and marketing efficiencies and inefficiencies.¹⁴ Since it would be serendipitous if all the relevant optima converged on a

¹³ "In the beginning ... there were markets...." Williamson shortly thereafter notes that "transactions will be organized in markets unless transaction-cost disabilities appear." "The Modern Corporation: Origins, Evolution, Attributes," p. 143. Also see his "Transaction-Cost Economics: The Governance of Contractual Relations," especially pp. 112 - 118.

¹⁴ The Structure of Competitive Industry (Cambridge: Cambridge University Press, 1959) was first published in 1931. Robinson's interest in the factors that govern the size of the firm led him to search for a definition of the firm. "In my view we have to be interested not only in the technical unit -- the plant -- but also in the units of management, of selling and buying, of capital raising, of risk-spreading, and so on." (p. 9)

Although Coase's 1937 article cites Robinson a number of times, Coase apparently felt his more general approach superior to that of Robinson. Note Williamson's comment in this connection:

specific firm size, there's likely to be a trade-off between, say, a firm that is too large to be efficiently managed, yet too small to take full advantages of marketing economies.¹⁵

In any case, internalizing some functions -- be they as unglamorous as shipping or bookkeeping or as sophisticated as robotized manufacturing -- becomes potentially profitable. To be sure, the firm now encounters hitherto avoided expenses. Presumably, however, the gained economies outweigh these new costs.

Firm expansion and the role of control

"Control" is a second motive for moving some functions in house.¹⁶ The firm that relies exclusively on outside suppliers is singularly dependent upon them. Even where the firm's suppliers operate in a competitive market and value its repeat business, it is they, not the firm, who hold the upper hand. This lack of control over the process manifests itself in a variety of ways such as shipment timing or product quality. Since glitches inevitably arise in human intercourse and since the first recourse of the customer will be to the middleman, delays or missed delivery appointments roost home to the order-taker, not the actual distributor. Similarly, complaints about the wrong merchandise shipped, damaged goods, or even poor quality items are directed to the last link in the chain reaching to the final user.

Robinson ... proposed what we believe to be a substantially correct answer [to the question of the optimum firm size], namely, that problems of coordination imposed a static limitation to firm size; and Coase in his classic 1937 article on 'The Nature of the Firm' generally supports this position. (p. 33)

¹⁵ Robinson devotes a chapter to "the optimum managerial unit" (III), "the optimum financial unit" (IV), "the optimal marketing unit" (V), and then a brief chapter to "the reconciliation of differing optima" (VII).

¹⁶ Control here is used more broadly than as understood by Williamson in "Hierarchical Control and Optimum Firm Size." Williamson there refers to management control over in-firm information, while I mean management's desire and therefore action to oversee any of a firm's multifaceted operations and functions.

Finally, the information the firm seems to have monopolized by setting itself up as the intermediary between the user and producer is disclosed the moment the customer receives the shipment. Why should they turn to the middleman for reorders? And why should the distributor not respond to a direct retail order?

Expanding by undertaking additional functions in house enables the firm to gain some measure of control, which varies directly if not linearly with the size and complexity of the firm. Thus, if the proprietorship sets up a distribution center, which serves as a transshipping point, and hires and trains its own employees, it gains control over its sources. The firm thereby prevents unwanted disclosures and facilitates better communication with customers. Desire for further control over quality may induce the firm to initiate assembly and/or component production.¹⁷

Williamson's emphasis on transactions costs may well be a subset of the more general desire for control. In his scheme of economic life, people are both "less competent in calculation and less trustworthy and reliable in action."¹⁸ Because of this bounded

¹⁷ These considerations apply equally to a service provider. For example, an agency that supplies household or health care workers may operate by employing each person as a contract employee. The agency, functioning merely as a broker, marries the independent contractor with the end-user for a fee. The contractor then collects payment directly from the user of the service.

But once the marriage is made, there's little incentive for the worker to return to the broker. The next job is likely to emerge by a recommendation from the current one. Moreover, the broker has little control over the quality of service. (There may well be a "lemons" problem here. The better workers never return to the agency, leaving the agency with only poorer-quality help. On the original specification of the lemons problem, see George Akerlof, An Economic Theorists's Book of Tales: Essays that Entertain the Consequences of New Assumptions in Economic Theory (Cambridge: Cambridge University Press, 1984), Chapter 1.) The broker can protect himself by hiring the worker as an employee. Both gain. The employee obtains certain contractual benefits (e.g., steady employment), while the employer has a better handle on the quantity and quality of service.

¹⁸ p. 140.

rationality, individuals cannot possibly know everything that needs to be known and resolve all problems that demand resolution. Moreover, economic actors behave opportunistically, and are characterized by Williamson as being "self-interest seeking with guile."¹⁹ Since contracts between economic actors cannot specify all possible contingencies, economic relationships such as the pure middleman tend to be quite rare. Instead, the firm internalizes some functions, thereby reducing the impact occasioned by the absence of perfect foresight and the inability to make binding and enforceable commitments.

Williamson specifies 3 variables that determine whether a firm is apt to rely on the market as opposed to in-house operations: (1) the degree of asset specificity, (2) the extent of uncertainty, and (3) the frequency of transactions. The market is a more appropriate organizing principle when assets used by the firm, be they capital or human, are not firm-specific, when uncertainty is limited, and when transactions are recurrent.²⁰ The more the situation diverges from these conditions, the more will reliance on the market entail transactions costs, and the more likely will the firm turn to a hierarchical organization and consequent internalization.

In short, both economic and control reasons may motivate a firm to replace reliance on external organizations with meeting its needs from in-house operations. It seems clear as well that as the firm commits itself to assuming more responsibility either to its customers or its suppliers, it is likely to demand more authority over its processes.

Vertical integration

¹⁹ p. 140.

²⁰ "Transaction-Cost Economics: The Governance of Contractual Relations," p. 111f.

The literature of vertical integration fits well into this scheme, for is not vertical integration merely replacing a market relationship between a buyer and seller with common ownership and hierarchical authority? Thus, it is not surprising to discover both economic and control motives used to explain such consolidations. Scherer, for example, justifies vertical integration with Robinson's balance of processes reasoning.²¹ Scherer also alludes to a control motive. A firm facing a monopolistic supplier lessens its dependence on the supplier by producing the input within the firm.²² But again, it is Williamson who has most fully elaborated on the organizational sources of vertical integration.

Williamson's seminal article, "The Vertical Integration of Production: Market Failure Considerations,"²³ is suffused with transactions-cost motives for replacing independent organizations with common ownership/management. Among the reasons he proposes are: (1) the more complete and less costly information available internally combined with (2) management's ability to better control internal activities,²⁴ and (3) the costs of contracting in circumstances when the parties cannot easily agree on either short- or long-term contract provisions.

The Limits to Firm Size

²¹ See F.M. Scherer, Industrial Market Structure and Economic Performance (Boston: Houghton Mifflin, 1980), p. 89. See also Williamson, pp. 85 - 86. The latter, citing Coase and Stigler, also mentions such economic considerations as minimizing taxation on intermediate products and circumventing quota or price controls (pp. 96 - 97). Integration for these reasons, however, does not improve efficiency.

²² Page 90. The same reasoning would apply to a monopsonistic demander, leading to upstream integration.

²³ Pp. 85 - 100.

²⁴ The former includes "economies of information exchange," such as common training leading to a common culture, while the latter encompasses internal conflict resolution mechanisms.

Obviously, vertical integration cannot proceed endlessly. For if vertical integration always lowers costs, we are faced by Coase's obvious question: "Why is not all production carried on by one big firm?"²⁵ The answers to this question are varied, but boil down to "too big is too costly." Coase accepted diminishing returns to management as constraining firm size. He suggested that the diseconomies stem from organizational costs and the sheer inability of management to make correct economic decisions as the size of the firm becomes ever larger and more complex. Finally, input costs may be higher for the large firm.²⁶ Williamson's focus on rising costs associated with the bureaucratization of the large firm fits clearly into the Coasian tradition.²⁷ Grossman and Hart theorize that integration may not always be profitable. They argue that each firm tends to have a unique investment plan and thus an asset structure based on the "residual rights of control" of its owners. Integrating two possibly disparate asset structures may not result in the most appropriate investment mix for the combination.²⁸

Clearly, then, cost considerations limit the extent of internalization. While both economic and control motives lead owners to expand in-house operations, they face constraints that signal a halt to internalization. It is equally evident that the more operations performed in house and thus the greater control attained by management, the more complex

²⁵ Coase, p. 23.

²⁶ Ibid.

²⁷ See his "The Logic of Economic Organization" in Williamson and Winter, pp. 90 - 116, which also contrasts his approach to that of Grossman-Hart mentioned in the next sentence.

²⁸ Sanford C. Grossman and Oliver Hart, "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration," Journal of Political Economy, 94 (1986): 691 - 719. Hart claims that he and Grossman adhere even more the Coasian tradition than does Coase! See Oliver Hart, "Incomplete Contracts and the Theory of the Firm," in Williamson and Winter, pp. 139, 142.

and thus more costly is the firm's organization structure apt to be.

III. The Economics of Contracting Out

The analysis to this point dealt with how far a firm should expand. The essential rule is: Extend in-house operations to the point where the costs of further expansion are perceived to be greater than acquiring the components or services through the market. The likely constraint on expansion may be production costs, but they may also -- and some would argue, more likely -- be costs of organization or, more generally, transactions costs.

Contracting out suggests that the firm has expanded beyond that limit and is seeking to retrench. Nevertheless, with one important difference involving preexisting commitments, the analysis of the two decisions is analogous. It is best to discuss first the distinction between the two cases and then proceed to the common analysis.

The additional set of costs that must be dealt with in deciding to move some in-house functions outside the firm involve investments and commitments made to existing factors. Certain assets will no longer be necessary if the functions they performed will be contracted out. Costs may be incurred even if the redundant assets are used in other parts of the firm or sold, assuming that the return in their next best use is lower than in their present use.²⁹ The same is true for other factors, such as labor under long-term contract, which in effect become fixed assets to the firm. It is thus conceivable that a firm may not contract out even if the running costs of a contracted out operation are below those of in-house operation. The additional cost deriving from existing assets reverses the decision predicated only on the

²⁹ When asset specificity, stressed by Williamson, is significant, transfer may not be possible. On the other hand, it is conceivable that asset reallocation or sale actually is profitable, converting the presumed cost into a positive return.

direct cost comparison.³⁰

Absent such considerations, however, the in-house expansion and the contracting out decision rest on production and transaction costs. That suggests a 2 x 2 matrix and the possibility of trade-offs. Production in house may well be more efficient for both economic and control reasons or may be more expensive than external procurement for both reasons. Or, in-house production may be cheaper for economic reasons but the cost-saving is offset by transaction costs. Finally, organizational costs may be minimal, but production diseconomies overwhelm the organizational cost savings.

To be sure, the types of transaction costs likely to be encountered differ. The transaction costs of insourcing have more to do with the impact of integrating the new operations into the existing management structure, which is presumed to require costly changes in organization. In contrast, contracting out involves costs related to assuring efficient outsourcing in an environment characterized by incomplete contracting (in the transaction cost sense). Hence, the principal-agent conflict, which had been muted when the operation had been performed within the firm, rises to the fore. The contractor's own agenda has much in common with that of the contractee, but it cannot be presumed identical. The contracting-out firm must not only assume such a conflict, but must realize it is on the short end of the asymmetric information predicament. The firm must devote resources to resolving this dilemma, and so undertake *contracting costs*. Such costs will be associated with identifying suppliers that can provide the input at the appropriate cost and quality, devising and implementing procedures for issuing and monitoring the contracts, and providing

³⁰ This may be one explanation for contractees insisting that contractors absorb both the fixed assets and employees of the former.

methods for renegotiating or canceling the contracts should circumstances change.

The optimizing firm performs the calculations -- perhaps more correctly, guesstimates -- and decides on the basis of firm-specific and perhaps industry-specific elements. In this context, it is important to keep 3 considerations in mind. First, since the internal versus external operation is not an all-or-nothing decision, separate guesstimates must be made for each of the many possible functions. Second, the distribution of operations between internal functions and outsider provision is not static within the firm. As circumstances change, so, too, will the mix between contracting-in and contracting-out.³¹ Finally, because decisions depend on estimates and subjective control desires, there can be no universal solution to the internal versus external operation decision. Different firms of the same scale and complexity in the same industry may rationally opt to internalize more or less. Nor need they choose to internalize the same functions. Thus, the economist can do little more than point out the elements that comprise the decision set.

Some anecdotal evidence of the variety of internal versus external operation may prove illuminating. Consider first the growth of firms in the personal computer industry. Some manufacturers such as CompuAdd began as distributors of the products of others, and ultimately expanded into assembling their own PCs.³² Digital Equipment Corporation, which during the early 1980s had manufactured its own PCs, revamped its strategy to design

³¹ A reshaping of the mix between in-house versus contracting-out part supplies was a component of the significant restructuring of its North American operations undertaken in 1992 by General Motors. See The New York Times, September 2, 1992, p. A1.

³² Bill Hayden began in 1981 by selling computer parts out of the back of his car. He launched CompuAdd the next year. By 1992, CompuAdd, with its 1500 employees, anticipated sales in excess of \$1 billion. Newsweek, January 6, 1992, p. 35.

the PCs but have the hardware built by others. In 1992 DEC returned to its original mode, announcing plans to manufacture its own PCs once again.³³ Presumably insourcing was induced by some combination of cost economies, the desire to better control the final product, and the need to solidify the firm's relationship with its customers.³⁴

A different pattern is evident in the aircraft and automobile industries. Boeing, for example, considers itself essentially a design and assembly outfit. It contracts out the vast majority of its planes' structure and parts, and its contractors subcontract further. Similarly, much of the components of automobiles are outsourced, although design, assembly, and financing are the exclusive province of the manufacturer. Yet diversity is evident within the automobile industry. Ford Motors is more integrated than is General Motors. Henry Ford was concerned about supply interruptions, and so acquired coal and steel and transportation companies,³⁵ a move not imitated by the other automobile companies.

At the other end is the world of small business, with the service professions providing a good example. When the office is small, with say one or a few physicians practicing jointly, most functions are likely to be provided externally, with only such procedures as appointment-making and billing and perhaps certain types of nonsophisticated testing (e.g., x-rays, blood and urine analysis) handled in house. The reasoning is straightforward: Physicians specialize in the practice of medicine, not in business management. But as an

³³ The New York Times, February 8, 1992, p. L37.

³⁴ A DEC spokesman is quoted as saying that DEC had always intended to build PCs "if we reached certain volumes." Ibid.

³⁵ Allan Nevins and Frank Ernest Hill, Ford: Expansion and Challenge, 1915-1933 (New York: Charles Scribner's Sons, 1957), p. 201. See also Chapter 9.

alternative delivery method, the large group practice, has become more popular, the physicians often turn into salaried employees, while professional management runs the operation. In such cases, more functions are performed in house, with apparent economies of scale and scope. Advanced and expensive technology becomes affordable as does sophisticated laboratory testing.³⁶ But clearly the range of internal versus external provision of service varies across the board.³⁷

Monitoring and Contracting Out

Monitoring is virtually synonymous with contracting out. Consequently, a critical input in the decision to go the in-house route versus relying on external providers is the cost of effective monitoring. Monitoring costs are also more quantifiable, and thus permit a more definitive conclusion about the desirability of contracting out. For if on monitoring cost grounds alone contracting out proves inferior, then certainly additional transaction cost motives need not be explored to reject the contracting out option.

It is worthwhile to begin by distinguishing between monitoring in the present context and the monitoring that businesses practice under the rubric of quality assurance and quality control. The latter exist whether operations take place internally or externally. Quality

³⁶ The lemon problem raised in footnote 17 may apply to medical practice as well. It's a widely-held perception that the better physicians practice privately, while either less-experienced or less-qualified doctors are found in group practice. Even if not true, such perceptions may well be self-fulfilling. If patient recommendations play a major role in determining the extent of a physician's practice, then those members of a group practice who can build up a private clientele may leave for more lucrative and less regimented environment of the private practice.

³⁷ The coexistence of freight shippers and owner-operated trucks and the coterie of service suppliers to small business such as CPAs together with firms that maintain in-house accountants are only examples of the variety of options. That the functions are provided externally indicates either that the loss of control is negligible or that it is adequately compensated for by their relatively low cost.

assurance relates to the methodology of assessing quality and is a branch of sampling theory. The typical issue posed by quality assurance is: How many vehicles coming off the assembly line should be sampled for defects? Quality control is the next step: Actually sampling the vehicles and repairing or scrapping those samples found defective. Quality control and assurance normally relate to the physical specifications of a manufactured product or the specified service quality.³⁸

In the present context, monitoring extends beyond quality assurance and control. It encompasses all activities related to assuring that functions produced externally meet the needs of the recipient.³⁹ Thus, monitoring costs would include such initial costs as demonstrating to contractors how to run their operations to meet quality and cost targets. Similarly, monitoring costs encompasses management time involved in decision-making concerning the external suppliers -- whether to change the sampling frequency or to replace suppliers who haven't performed satisfactorily.

Internal monitoring is apt to be less expensive than external monitoring for a number of reasons. Asymmetric information is one difference. The employee has less incentive to act opportunistically than does the external supplier, from whom the profit motive may, in

³⁸ Representatives of companies that provide services over the telephone often record conversations, which are then evaluated by supervisors. Similarly, staff inspectors visit hotels and restaurants to evaluate service quality.

³⁹ Monitoring in this sense is related to "agency costs," the costs of assuring that the agent's actions conform to the interests of the principal. That involves evaluating contributions, preventing free-riding and shirking, and in general assuring compliance with the terms of the contract. See Bengt R. Holstrom and Jean Tirole, "The Theory of the Firm" in Richard Schmalensee and Robert D. Willig (eds.), Handbook of Industrial Organization (New York: North-Holland, 1989), vol. I, pp. 68 - 69. Incidentally, this article and its associated bibliography provides an excellent overview of issues related to the modern theory of the firm.

certain circumstances, dictate cutting corners.⁴⁰ Suborning of the monitors is also more likely under conditions of external supply, mandating costly monitoring of the monitors.⁴¹ Presumably, too, changes in quality control procedures can be instituted more easily internally by fiat than externally, where contract renegotiation might be necessary.

The internal versus external production decision can then be phrased as follows: *What are the net benefits of internal supply if the costs of internal operation -- including both production and control costs -- are higher than external procurement, but monitoring costs are lower?*

The marginal analysis developed in the theory of the firm can be easily applied to this in-house versus external procurement decision. Although the typical distinction economists make between fixed and variable costs apply to monitoring activities as well as to

⁴⁰ This statement generalizes Williamson's externality principle, which he uses to explain forward vertical integration. When the poor performance of some distributors adversely affects the reputation of a product and thus sales of other distributors, the manufacturer might want to acquire the distribution network (p. 145).

Williamson there uses monitoring costs to explain the more likely absorption of suppliers than distributors. "The differential ease of inspecting, and thereby controlling, the quality of components and materials that are purchased from earlier-stage and lateral suppliers as compared with the cost of exercising quality controls over distributors is responsible for this condition." (p. 145) He adds in a note: "Manufacturers may, of course, decide to integrate into components if work-in-progress inspections are cheaper than final inspections." (p. 147, n. 21.) But Williamson does not identify the sources of these economies.

⁴¹ Some construction contracts for projects executed in Third World nations and financed by international organizations require that the projects be monitored by independent monitoring firms. (Such was the case when a UN agency hired an independent monitor to keep track of a German road building operation in Sierra Leone.) Of course, such contracting out of monitoring does not resolve the issue; it merely moves it back one stage. Moreover, conflicts of interest may arise if the monitors also work for the contractors. Such allegations have been made with respect to federal contracts. See The New York Times, January 8, 1992, page A17.

production,⁴² there's little to be gained by such complications. Furthermore, the analysis is more tractable by assuming constant marginal costs (MC) for both production and monitoring. Finally, it's less complicated to deal with a "macrocontracting out" case, where the entire production operation is outsourced.⁴³

Given the general cost function, $C = f(P, M)$, where C is total cost, and P and M are production and monitoring costs respectively, consider the following 2 cases:

$$(1) C = (a + b)X \quad \text{and} \quad (2) C' = (a' + b')X,$$

where a and a' are the marginal production costs and $a < a'$ and b and b' are the marginal monitoring costs and $b > b'$. Clearly whether MC is greater than, equal to, or less than MC' hinges on whether $(a' - a) < (b - b')$ or vice versa.⁴⁴ The ultimate decision to contract out or not then simply depends on the relationship between MC and MC'. And it is equally

⁴² Some monitoring costs are independent of the volume of contracted out activity; others vary directly with the extent of monitoring. Thus, the minimum technical and administrative staff needed to run a monitoring department, the space it occupies, and the nature of procedures and contracts do not vary with monitoring activity. But clearly the number of employees engaged in monitoring entails variable costs. It's quite likely that the other costs of contracting out, such as contract bidding and negotiation, are basically fixed.

⁴³ For example, macrocontracting takes place when Boeing buys its wheel assembly from a contractor or GM purchases tires from Goodyear.

⁴⁴ Ferris and Graddy (1991) in their study of choice of contractor -- public, nonprofit, or private -- make the strong assumption that private firms are more efficient than public suppliers, but transaction costs are invariably higher. Yet they eschew a simple cost minimization model. Instead, they posit a differential weighting of costs that depends on the relative importance of the these two cost elements. Production costs are budget line items and transaction costs are not. The former are presumed to determine tax rates and thus meet resistance from the general public, which does not directly benefit from the service in question. Hence, this group weighs production costs heavily and would prefer external public providers. This stands in contrast to the special interest groups that benefit from the service and wish to minimize the transaction costs of the particular service. Hence, the Ferris-Graddy model permits the possibility of selecting a high-cost private contractor over a public contractor that would be more efficient, all costs considered. They test this hypothesis on data from 3 types of local health services, and find that their model fits rather well.

evident that any change affecting either the a's or the b's -- for example, production or monitoring technology -- can lead to a reevaluation of the contracting out decision.

This simple model can be applied to the central policy issue of this paper: The contracting out of government functions. Two questions need to be addressed. First, is government production less efficient than private production ($a < a'$)? Second, if the costs of government production are higher than private production ($a' > a$), are comparative monitoring costs ($b - b'$) sufficiently large to consume the production cost savings.⁴⁵ The next section responds to these questions.

IV. Contracting Out in Practice

The evidence that contracting out of government operations reduces government outlays appears overwhelming. Indeed, the literature on contracting out in the U.S. local government sector is virtually unanimous that in-house operation is more expensive than contracting out.⁴⁶ Thus, it is hardly surprising that ever more municipalities have turned to contracting out to curtail their budgetary outlays.⁴⁷

⁴⁵ The crucial assumption is that private providers, driven by the profit motive, act opportunistically when given the opportunity. Monitoring serves to constrain such inherent opportunistic behavior.

⁴⁶ Savas writes: "There is by now a lengthy array of studies which demonstrate quite conclusively that, in general, contracted services cost less and are at least as good in quality as corresponding services produced in-house by government agencies." The savings range from 22 - 33 percent in 4 studies summarized in Savas's Table 6 (p. 88). Other studies find similar if not larger savings. See E.S. Savas, "Privatization and Productivity," in Marc Holzer (ed.), Public Productivity Handbook (New York: Dekker, 1992), pp. 79 - 98. For Canada, see James McDavid, "Privatizing Local Government Services in Canada," in Michael A. Walker (ed.), Privatization: Tactics and Techniques (Fraser Institute, 1988), pp. 101-116.

⁴⁷ Savas notes that "virtually every jurisdiction in the United States contracts for one or more services," and estimates that contracting out in the U.S. between 1982 and 1988 grew at a 4.5 percent annual rate. Ibid., p. 82. But see Janet Rothenberg Pack, "The Opportunities and Constraints of Privatization," in William T. Gormley, Jr. (ed.), Privatization and Its Alternatives (Madison: University of Wisconsin Press, 1991), pp. 281 - 306. Pack (p. 298) writes: Although

Caveats on Public - Private Sector Comparisons

Such unanimity invites suspicion.⁴⁸ As the wise investor knows: If it's too good to be true, it probably isn't. More to the point, we need to deal with 4 issues before concluding that contracting out is invariably the cheaper alternative. First, the accounting methodologies used by government entities often serve different objectives than those used by private firms. Cost comparisons will be meaningful only if the two are evaluated within a common framework. Second, rarely have the contrasts considered an alternative: Improving the efficiency of the public delivery system. A more efficient public provider may prove as inexpensive as a private sector producer. Third, most of the literature is satisfied with citing the cost saving without indicating its causes. Yet the sources do matter for evaluating the efficiency of contracting out. Finally, contracting costs in general and monitoring costs in particular have been most shabbily treated by virtually all the studies. I take each of these points in turn.

1. *Measuring costs.* A bent measuring rod is often used to compare the costs of private and public sector operations. Government accounting and budgeting usage at times is radically different from private sector procedures. Frequently, an agency's budget lists only operating costs, leaving capital expenses, interest on capital employed, and even employee pension

contracting is widespread, what is surprising ... is that the number of [municipalities] using contracting for various purposes appears to have expanded very little [between 1982 and 1987], and may even have declined for several service types."

⁴⁸ Rabbi Kahana, an early Jewish legal scholar, ruled that a person unanimously thought by the judges at their first hearing as guilty of a capital crime must be released (Babylonian Talmud, Tractate Sanhedrin, folio 17a). Although his specific reason rests on a technicality -- the open mind that judges must possess in order to deliberate fairly can no longer be presumed -- one cannot help but wonder whether a more fundamental principle is involved. Too perfect a case itself raises sufficient suspicions of treachery to warrant suspending the irreversible punishment.

costs for a combined budget overhead category that lumps together such expenses for all departments. Similarly, taxes are not paid for many types of public service production, but clearly enter into the budget of private enterprise.⁴⁹

Now, were the case to be, as some have implied, that government expense allocations always understate costs, the problem would be less acute. After all, if even then government operations are more costly, surely a private sector enterprise would be more efficient. This hypothetical, however, must be rejected. Using costs to measure comparative efficiency implies that the parties being compared face the same options and constraints. That may well be appropriate when both the private and public sector entities acquire inputs in similarly organized markets. But when a government agency is mandated to purchase inputs at above-market prices, are such cost comparisons meaningful? Are cost accounting comparisons useful if, as is quite typical in LDCs, SOEs are required to make good on the government's commitment to serve as an employer of last resort and so institutionalize labor redundancy? When the productivity of a service-supplying SOE is measured by dividing the value of output by input quantity but its output value is constrained by pricing policies that require below market and slowly-changing prices, is the resulting low productivity a measure of inefficiency? Clearly, cost comparisons must be judiciously made before reaching a firm conclusion that government provision is always more costly than private production.

Data bias is a related issue that needs to be addressed. Reports of private providers replacing at a lower cost government entities are only one dimension, and hence relying on

⁴⁹ See E.S. Savas, "How Much Do Government Services Really Cost?" Urban Affairs Quarterly, vol. 15, no. 1 (1979): 23 - 42. Rehfuss, p. 21. Note, too, the tax free status of government securities, so that capital costs of government entities are lower.

only such evidence is one-sided. No one to my knowledge has compiled data on the number of instances in which private sector contract bids exceeded present government costs so that the authorities did not choose the contracting out route.⁵⁰ Nor do we have information on contracts awarded to private providers that over time proved too costly, so that the operations ultimately reverted to the public sector. Hence, the preponderance of biased evidence does not compel us to conclude that government production is inherently less efficient than private provision.

2. *Alternative Delivery Mechanisms.* The concept that government production is indeed inherently less efficient than private production can be justified on a variety of grounds.⁵¹ In this context, it's crucial to distinguish between the private owner-operated firm and the professionally-managed corporation. We must contrast the relative efficiencies of each of these operational modes to a public sector entity, which is normally thought more analogous to the latter. Most economists believe that the owner-operated private enterprise is likely to be more efficient than the government sector operation. The difference lies in both motivation and reward. The drive toward efficiency in the owner-operated firm is directly

⁵⁰ I am indebted to Barbara J. Stevens for this point. It's easier to find anecdotal evidence of failed contracting out. See, for example, the 5 case studies in Reh fuss, pp. 249 - 256. Also, the Linowes Commission reported that about 40 percent of the time, federal government agencies win contracting out competitions. (p. 132) Similarly, Carl E. Van Horn, "The Myth and Realities of Privatization," in Gormley, pp. 261 - 280, which reports on a 1986/87 survey of contracting out among New Jersey county and municipal government officials, cites 3 state department feasibility studies that concluded private contracting out would not have brought any savings to the departments concerned. (p. 271.)

⁵¹ Different incentive structures available to private firms and government enterprises play a central role in explaining comparative efficiencies in my "Is Privatization a Panacea for the LDCs? Market Failure versus Public Sector Failure," Journal of Developing Areas, 26 (April 1992), pp. 302 - 321, especially pp. 306 - 309.

linked to the profit motive and the owner's capture of net income. The lean and mean private firm sharply contrasts with a bloated and dispirited public sector behemoth, where profits are rarely the stated objective nor do the public sector employees share in whatever profits may accrue. When the option facing the government authorities is to transfer a large bureaucratic public enterprise into a more dynamic private sector owner-operated firm, then contracting out may well result in operating efficiencies.⁵²

That conclusion, however, is less persuasive when the contractor is a professionally-managed firm whose stockholders exercise little if any day-to-day control. Both types of organizations are characterized by a principal-agent conflict. Neither professional private nor government managers can be presumed to have the same intense drive for profits for their owners, be they private stockholders or public agencies.⁵³ Hence, one ought not reach conclusions concerning relative efficiencies without being privy to their specific incentive and monitoring structures. Moreover, the competitive nature of the input and output markets are no less -- and perhaps more -- critical in evaluating the relative efficiency of the 2 ownership options. Surely a public enterprise selling its output on a competitive market will be more efficient than a private monopoly.

To be sure, there's much truth to the impression that state-owned enterprises (SOEs)

⁵² The efficiency gains of contracting out reported in a major and near-universally cited study of contracting out in the U.S. -- Barbara J. Stevens (ed.), Delivering Municipal Services Efficiently: A Comparison of Municipal and Private Service Delivery. Summary (New York: Ecodata, 1984) -- may be explained by a shift from a bureaucratic production process to an owner-operated mode. Dr. Stevens, in a letter to me, wrote that the winning "contractors tended to be owner-operated..." (March 28, 1992).

⁵³ If "public service" is a meaningful concept or if, as in France, public service is highly prestigious, then one could posit that government managers are less likely to pose a principal-agent problem than are private sector managers.

are less efficient than private establishments of similar organizational structure⁵⁴.

Nevertheless, the exceptions are sufficiently numerous not to be ignored. Millward's review of the technical efficiency of private versus public enterprises in the developing world led him to conclude that "there is no evidence of a statistically satisfactory kind to suggest that public enterprises in LDCs have a lower level of technical efficiency than private firms operating at the same level of operation."⁵⁵ Tyler found that the efficiency of Brazilian steel firms did not hinge on the ownership. SOEs, privately-owned domestic, and privately-owned foreign establishments were equally inefficient.⁵⁶ Grosh reports a similar conclusion in her study of Kenyan parastatals.⁵⁷

Anecdotal evidence abounds as well. Aylen singles out 2 extremes among publically-owned steel mills: South Korea's Pohang Steel Company and the Steel Authority of India. In Aylin's words:

The South Korean firm is highly entrepreneurial, technically up-to-date and arguably the world's lowest cost integrated steel producer. The Steel Authority of India has outdated plant, is slow to commission new projects, is heavily protected from imports, and has a labour productivity

⁵⁴ See the evidence in Prager, p. 305.

⁵⁵ R. Millward, "Measured Sources of Inefficiency in the Performance of Private and Public Enterprises in LDCs," in Paul Cook and Colin K. Kirkpatrick (eds.), Privatisation in Less Developed Countries (New York: St. Martin's Press, 1988), p. 157.

⁵⁶ William G. Tyler, "Technical Efficiency in Production in a Developing Country: an Empirical Examination of the Brazilian Plastic and Steel Industries," Oxford Economic Papers, v. 31, no. 3 (November 1979): 477 - 495. See also the literature reviewed in Yair Aharoni, The Evolution and Management of State-Owned Enterprises (Cambridge, MA: Ballinger, 1986), Ch. 5.

⁵⁷ Barbara Grosh, Public Enterprise in Kenya: What Works, What Doesn't, and Why (Boulder, Colo.: Lynne Rienner, 19), p. 154. "In the manufacturing sector, while public firms are on average inefficient, private firms are at least as inefficient."

per worker perhaps a tenth that of its South Korean rival.⁵⁸

Similar observations have been made in connection with France's chemical giant, Rhone-Poulenc, Ethiopian Air Lines, and Tamil Nadu's (India) Cheran Transit Corporation. Hence, one must seek reasons and provide evidence that contracting out will invariably increase efficiency.

3. *Sources of cost savings.* Costs can be driven down by forces within the control of the provider as well as by such external elements as the nature of the product and input markets. A monopolist -- be it a private or a public sector entity -- will be less sensitive to inefficiency than will the firm facing a competitive market. When market structure is responsible for inefficient resource use, then at first blush it is difficult to see why contracting out should induce cost savings. Surely replacing a public monopolist with a private monopolist will not lead to any externally-induced efficiencies. Indeed, the static theory of monopoly, which provides the "natural monopoly" justification for the nationalization of an industry characterized by continuous economies of scale, suggests that the public monopoly will actually be more efficient.⁵⁹ Similarly, public sector unions will not evaporate when a service is contracted out. In fact, the labor monopolist may strengthen its power if the previous bilateral monopoly of government versus union is replaced by a more competitive group of suppliers facing a labor monopolist.

⁵⁸ Jonathan Ayles, "Privatization in Developing Countries," Lloyds Bank Review, no. 163 (January 1987), pp. 19 - 20.

⁵⁹ Public utility theory asserts that the cost-covering public sector monopolist will set price equal to average cost, determined by the intersection of the demand and AC curves. The private sector monopolist prices on the basis of marginal cost = marginal revenue, which leads to a smaller and hence higher-cost output. See, for example, Jonas Prager, Applied Economics: An Intermediate Text (Homewood, Ill.: Irwin, 1993), pp. 416 - 417.

Conventional wisdom claims otherwise. Unionization causes government workers to be better compensated than private sector employees. Cost savings occur when the contractor breaks the union's power, hiring employees in a labor market that is more competitive than the public sector. Alternatively, the terms-of-employment differential may stem from the dual nature of government workers. They are not only employees but also voters. Consequently, it is often in the best interests of government authorities to appease rather than to resist worker demands. That dual nature obviously is not characteristic of the private sector.

Unfortunately, this scenario is at best incomplete and at worst wrong. The most damaging evidence comes from Stevens's extensive study of contracting out of 8 services in 20 California cities. Stevens concluded that private employees were paid salaries and fringes comparable to those received by public employees.⁶⁰ This evidence is strengthened by noting specific legislation dealing with contracting out. Under provisions of the federal Davis-Bacon and Walsh-Healy Acts, contractors must pay their workers no less than "prevailing" or "prevailing minimum" wages. At both the federal level and in states that have similar laws, this often means that contractors must pay their workers union rates for the particular occupation in question. Similarly, under the Federal Salary Reform and Federal Pay Comparability Acts federal employees must be compensated in line with private industry wages. Again, many states and localities have comparable legislation.

Donahue, however, disputes Stevens's conclusion. Using her own data, he asserts:

⁶⁰ Barbara J. Stevens (1984). For a summary, see Barbara J. Stevens, "Comparing Public and Private-Sector Productive Efficiency: An Analysis of Eight Activities," National Productivity Review, vol. 3, no. 4 (Autumn 1984), pp. 395 - 406. See p. 402: "Nor, on average, is the cost discrepancy [between private and public providers] due to differences in wages paid by contractors as compared to municipal agencies." She adds, ad locum, that this statement applies equally to fringe benefits.

"Higher wages and benefits alone account for ... one-fifth to three-quarters ... of the extra costs estimated for municipal agencies...." ⁶¹ Although Donahue's objections cannot be lightly dismissed, note the three-quarters entry is an outlier. The middle 3 cost differentials all lie in the 20 percent range. More to the point, Stevens's data indicated that 48 percent of the agencies' labor force was unionized while only a fifth of the contractors' employees were unionized.⁶² Only if we assume that contracting out breaks union monopoly power can we conclude that contracting out reduces labor costs.

Finally, anecdotal evidence suggests that generalization is inappropriate. Entry level compensation in the public sector is often higher than found in similar private sector positions. At the same time, the public sector finds retaining professional and upper-level management talent difficult because its compensation packages are inferior to those of the private sector. Labor cost savings, then, hinge on the nature of the task contracted out.

4. *Monitoring costs.* Monitoring costs have been reported in only a few studies. Savas listed them around 3 percent in a study of refuse collection. He believes them to range generally from 1 - 7 percent of contract costs, which roughly coincides with Rehfuss's own estimate of 5 - 10 percent.⁶³ Stevens's detailed survey did not separate monitoring from other contracting costs. Total contracting costs -- contract letting, administration, and monitoring --

⁶¹ p. 144.

⁶² Stevens (1986), Table 6, p. 404.

⁶³ E.S. Savas, "An Empirical Study of Competition in Municipal Service Delivery," Public Administration Review, 37, 6 (1977): 714 - 717, cited in Rehfuss, p. 95. Savas reported in a personal conversation the 1 - 7 percent range, which is based on his observation over the years. Rehfuss's "crude estimate" is reported on p. 96, but omits the cost of contract administration.

ranged from a low of 4.4 percent to a high of 33.1 percent.⁶⁴ Aside from the lack of clarity in defining monitoring costs, I submit that these percentages are uniformly uninformative, for they merely report what is, not what is appropriate. At best, they represent the lower boundaries of monitoring costs, and this for 2 reasons. First, they may be accurate estimates of activities that can be monitored at low cost, such as solid-waste collection, signal light repair, and street light operation. Second, they are based on reports from agencies that monitor. These authorities have given some thought to monitoring issues and to costing them out. But they appear to be the exception. Rehfuss reports that "most jurisdictions do not know what their [monitoring] costs are, and many are not particularly interested in finding out."⁶⁵ Moreover, we have no indication at all that even those who do

⁶⁴ Stevens lists the following costs for municipalities who have contracted out the specific services indicated. (Numbers are the percent of total costs for the specific service.)

Street cleaning, 11.9; janitorial, 34.9; refuse collection, 4.4; payroll preparation, 68.7; traffic signal maintenance, 18.1; asphalt overlay, 5.0; turf maintenance, 33.1; street tree maintenance, 25.7. (Stevens (1984), pp. 41, 99, 158, 214, 272, 326, 384, and 449)

A crude average that excludes payroll preparation and janitorial services because the data include some costs that are not contract related comes to 16.1 percent.

⁶⁵ Rehfuss, p. 95. Rehfuss personally surveyed city and county managers in 1986, and found that only a quarter could estimate monitoring costs. Van Horn suggests the pedestrian manner in which costs are handled are even more extensive. "When pressed, few officials could supply any hard evidence that private contracting was cheaper than government service delivery. If cost comparisons were ever made they were forgotten." (p. 271.) Such abysmal ignorance is not only depressing, but also sheds doubt on the value of surveys that report comparative costs and obviously the studies based upon them. This applies both to the the 1982 ICMA and the 1987 Touche Ross surveys, which cited cost reduction as the primary purpose for contracting out. [International City Management Association, Survey of Private Sector Approaches to Public Service Delivery (Washington, D.C.: ICMA, 1982) and Touche Ross, Privatization in America: An Opinion Survey of City and County Governments on Their Use of Privatization and Their Infrastructure Needs (Washington, D.C.: Touche Ross, 1987).]

monitor, monitor efficiently.⁶⁶ It may well be that proper monitoring may be so costly as to reverse the advantage of contracting out.⁶⁷

In short, despite the abundant evidence that purports to demonstrate the cost effectiveness of contracting out, we have no convincing proof that contracting out per se reduces costs. Indeed, Stevens provides evidence that contracting out can be more costly.⁶⁸ Nevertheless, some strong pragmatic reasons suggest that contracting out will be more efficient than the typical government operations. The reasons, however, are not inherently economic as much as political.

The Comparative Efficiency of Private and Public Enterprise

A useful starting point is to ask: What accounts for the cost distinctions between

⁶⁶ Monitoring frequently involves reviewing the financial terms of the contract. Monitoring the actual product or service to assure compliance with contracted specifications may well be the exception.

While inadequate monitoring seems to characterize U.S. municipalities, excessive monitoring appears to be common at the federal level. Consider the vast monitoring bureaucracy spawned by the Department of Defense's weapons acquisition process. Wilson, with true academic caution, suggests that such extensive monitoring might well constitute overkill: "To my knowledge no one has systematically compared the costs of all the inspectors, rules, and auditors with the savings they have achieved to see if all the checking and reviewing is worth it. Some anecdotal evidence suggests that the checking does not always pay for itself." He cites a \$100 saving on a part obtained through a competitive bidding process, which itself cost \$5,400. (pp. 323 - 324.) This, too, constitutes inefficient monitoring.

⁶⁷ Roger Koppl correctly pointed out to me that if government operations are inherently inefficient, then government monitoring likewise will not be cost-effective. Inefficient monitoring will then make contracting out even more expensive, strengthening the case for government provision of the service in question.

⁶⁸ Stevens (1984, pp. 403 - 404) disaggregated her data into less efficient and more efficient categories for each city. She found that 31 percent of the more efficient cities operated the 8 services through their own agencies.

typical SOEs and private firms as well as among SOEs themselves?⁶⁹ If we rule out differences in product or labor market imperfections⁷⁰, then we must turn to organizational disparities and claim, in Leibenstein's terminology, that the public sector is more x-
inefficient than is the private sector.⁷¹ Such inefficiencies may be attributed to one or more of the following conditions:

1. the firm's goals are either vague or conflicting, and efficiency is not ranked high;⁷²
2. management's independence is constrained by noneconomic considerations;
3. the reward structure for management and workers alike is not directed toward efficiency; and

⁶⁹ State operated enterprises, which are commercial operations producing a good or service, are much more akin to private businesses. Hence, comparisons between SOEs and the private sector firms are more likely to turn up differences in efficiencies than between noncommercial public sector operations, such as administration of the criminal justice system, and the private sector.

⁷⁰ There's no reason to believe that the government is more likely to grant protection from competition to a public entity than it is to a private entity that is similar in all respects other than ownership.

⁷¹ H. Leibenstein, "Allocative Efficiency versus X-inefficiency," American Economic Review 46, 3 (June 1966): 392 - 415.

⁷² Aharoni notes in his Chapter 6, "Objectives," that the very vagueness of objectives permits managers latitude in defining their own priorities. Furthermore, the managers' technical skill stands in sharp contrast to the political talents of the governing authority. Finally, management's control over information enhances its independence. Nevertheless, the presence of a varied group of "stakeholders" -- "workers, suppliers, customers, and users ... whose participation is essential to the proper functioning of the organization" (p. 171) -- leads managers to "perceive their role ... as managing the environment rather than managing the business in an efficient way." (p. 194)

If this is true in SOEs, how much more does it complicate the management of government departments and agencies, where the financial bottom line is irrelevant. As Wilson writes: "[G]overnment agencies, much more than business firms, are likely to have general, vague, or inconsistent goals about which clarity and agreement can only occasionally be obtained." (p. 26.)

4. inefficiency is not penalized and may even be rewarded.⁷³

None of these conditions is inherent to public enterprise. The World Bank credits the efficiency of Cheran Transit at least in part to an employee incentive structure comparable to that of its private competitors.⁷⁴ Aylen ascribes the success of China Steel, a Taiwanese SOE, to its being given "clear social and financial objectives, a great deal of autonomy, and day-to-day independence. The management was technocratic in approach, militaristic in achieving targets and disciplined by import competition from Japan."⁷⁵ Hence, the cost consciousness of private sector operatives can be -- indeed, has been -- achieved by the public sector as well.

Yet, if these instances are noteworthy it is only because they are exceptions. "Ignore efficiency" is the implicit message public sector management typically receives. Temptations abound for the political authorities to utilize government agencies and SOEs to achieve personal objectives such as reelection or reappointment. Even when inspired by the public good, politically-motivated intervention often leads to downgrading efficiency. And if this is true for state operated enterprises that produce and market a commercial product or service, and whose profits can be measured, how much more likely is inefficiency to be endemic in

⁷³ Janos Kornoi elaborates on the soft budget constraint, which alters SOE management incentives. A budget deficit is covered by taxing away the profits of efficient firms. See his "The Hungarian Reform Process," Journal of Economic Literature, XXIV, 4 (December 1986): 1687 - 1737.

The first 3 reasons are also elaborated in Simon Domberger and John Piggott, "Privatization Policies and Public Enterprise: A Survey," Economic Record 62, no. 177 (June 1986), pp. 147 - 150.

⁷⁴ World Development Report 1988, p. 178.

⁷⁵ Aylen, p. 22.

the typical government functions that produce services -- general administration, defense, social programs -- that are qualitative, not quantitative in nature.⁷⁶ Can one judge the efficiency of the public education system by number of graduates, the justice system by number of cases processed, hospital administration by time between patient intake and release? Hence, the evidence from the U.S. that private sector contractors appear to be more cost conscious than do public sector authorities is not surprising. Is anyone shocked by Stevens's finding that private contractors employed less labor, used it more effectively, and gave their supervisors greater authority?⁷⁷

If this analysis is correct, then contracting out is only one option in the quest for more efficient government operations. A second alternative is to remove the impediments to

⁷⁶ Wilson, Ch. 9, classifies government agencies as production, procedural, craft, and coping organizations. If managers are constrained even in production type organizations, where output can be measured, how much more so is that the case in coping organizations, where output is by its very nature unmeasurable?

⁷⁷ Stevens (1984), pp. 402 - 403. Stevens notes that the contractors used more youthful and part-time labor, utilized more capital per worker, and made managers responsible for both labor and equipment. Reh fuss suggests that the reduced level of absenteeism also mentioned by Stevens is directly related to the higher firing rates by contractors (p. 19). However, this supposition must be rejected. Stevens included vacation days as absences, and since municipal workers had significantly more vacation days, then, ceteris paribus, their absenteeism was definitionally higher.

Stevens's conclusion: "[I]n the majority of public agencies, the concepts of clear, precise task definitions and job descriptions, coupled with easily identifiable responsibility for job requirements, are not enforced as vigorously as in the majority of private enterprises. It is this difference that appears, in general, to be responsible for the very significant public sector-private sector cost differences cited earlier." (p. 405.)

Stevens's letter to me states that the difference lies both in the lack of clarity and precision in job definition and responsibility and the stricter enforcement of existing rules. It's still murky, however, whether the private providers were less x-inefficient or faced more competitive labor markets.

efficiency within the public sector operation.⁷⁸ Is contracting out no more than an admission by the authorities that reform is too politically costly?

V. The Political Advantages and Economic Disadvantages of Contracting Out

I suspect that the decision to contract out, when not inspired by ideology, is often motivated by political expediency.⁷⁹ Is it likely that the government authorities who have hopped aboard the contracting out bandwagon have undertaken a fundamental examination of options, weighed the economic pros and cons, and then reached a rational conclusion? Instead, government leadership sees it less costly politically to upset stakeholders once by transforming the manner of conducting business than being caught in a running battle for internal reform.

That contracting out is not an entirely new experience for many authorities enhances its attractiveness. Governments typically contract out projects that are unique rather than

⁷⁸ Stevens, despite her generally negative conclusions about public sector efficiency, suggests as one alternative that municipal governments emulate the best practices of efficient private sector firms. (p. 405). A less drastic step than contracting out that is not explored in this article is corporatization. This procedure is designed to reduce political intervention by transforming a politically-controlled department into a government corporation. Thus, the U.S. Post Office Department was converted into the Postal Service, a public sector corporation that has greater independence from the political process. On New Zealand see Susan K. Jones, "The Road to Privatization," Finance and Development (March 1991), pp. 39 - 41.

⁷⁹ Writes Jerry Frug of the Harvard Law School: "In my opinion, privatization has become an attractive idea these days because the reform that can readily be seen as an alternative to privatization -- transforming government itself -- appears to be much more difficult than the process of contracting out to a private concern. Reforming government is a formidable task not only because making the tough choices about the best way to operate is hard but also because ... they have to get their ideas adopted. This requires dealing with state legislatures, city councils, unions, and interest groups." "The Choice between Privatization and Publicization," Current Municipal Problems, 14 (1987-88), reprinted in Roger L. Kemp (ed.), Privatization: The Provision of Public Services by the Private Sector (Jefferson, NC: McFarland, 1991), pp. 305 - 310.

Inertia is a useful term to describe the endurance of contracting out even when its economic justification no longer remains. See Van Horn, p. 271.

ongoing or have significant start-up costs that cannot be amortized over a short period. Municipalities, for example, use contractors to build bridges and tunnels. These situations, however, are unrelated to the current spate of contracts, which are aimed at regular government functions such as solid waste disposal or fire protection service. These operations are repetitive, often involve capital and labor in place, and are not emergencies.

Nor is the economies of scale argument an economic as opposed to political justification for contracting out. When government entities are unable to take advantage of economies of scale -- a small municipality may find the costs of operating a jail or a fire station at well below capacity too expensive -- the function is contracted out to a private provider who amalgamates the demands of a number of contiguous local authorities to reach the efficient scale of operations.⁸⁰ It's not clear, however, why the contractor should be a private enterprise. Cooperative government efforts could presumably achieve the same scale economies. Indeed, the Contract Cities Association, which comprises 72 southern California municipalities, contracts out to public as well as private providers.⁸¹

⁸⁰ Rehfuss, p. 20. That seems to underlie the founding of the first of the public service private contractors, Rural/Metro, which runs a number of fire departments in the western U.S. Rehfuss also mentions the purchasing economies that accrue the larger contractor.

⁸¹ For example, the Los Angeles County Sheriff provided policing services to about half of the cities in Los Angeles County. See Osborne and Gaebler, p. 335; Wilson, p. 352. For greater detail on California's Lakewood Plan, see Rehfuss, pp. 234 - 242.

This same response answers Donahue's contention of economies of scale in innovation, namely that the payoff to a small municipality is likely to be too meager to warrant financing R&D. (p. 142). While this argument is true, it does not apply to cooperative government ventures. Moreover, small but significant innovations should not be disregarded. In this connection, see the brief case study of the Phoenix sanitation department in Osborne and Gaebler, pp. 76 - 78.

Donahue also cites as an economic advantage of privatization promotion opportunities based on merit rather than seniority, which is the more normal method of bureaucratic advancement. This argument is less a call for contracting out than for reform of public sector personnel administration.

In only one sense can the contracting out process actually lead to reduced costs. It can be a strategic crowbar that pries loose the deadwood of the public sector operation. The threat of contracting out, with its implicit prospect of job loss for management and workers alike, can spur efficiency. In essence, the political leaders are eschewing coerced reform, but desire its cost-reducing outcome. Their message is: "We can't force change upon you. But we can forecast that should business continue as usual, this operation will be terminated. Your future lies in your own hands. Significant reform that makes this operation competitive with outside providers saves your jobs. Otherwise, the contract is awarded to an outsider." Competition becomes the vehicle for eliminating x-inefficiency.⁸²

There's adequate evidence to show that government agencies, when permitted to compete for the contract, will reform their operations to make it the clear winner.⁸³ Work rules and habits can be modified, resistance to introducing cost-saving technology can be overcome, and redundancy can be eliminated. Indeed, given the appropriate incentives, there's no reason that a public fire department cannot achieve the efficiency of a

⁸² The Phoenix case cited in the last footnote is instructive here as well.

⁸³ In addition to the Linowes Commission evidence cited in footnote 50, here's the testimony of Paul Beresford, an official of the London borough of Wandsworth:

[W]e have tested ... nearly forty different services [of which] two-thirds went out to competitive bidding. Of those, two-thirds have been contracted out, one third remaining in-house.

The street lighting service is not contracted out but has used a private sector approach. It is a very much bigger service than it was in 1965. But just compare the work force -- twenty-five down to six today. And from twenty-five vehicles down to five.

See his "Wandsworth's Experience of Contracting," in Eamonn Butler and Madsen Pirie (eds.), The Manual on Privatization (London: Adam Smith Institute, 1989), pp. 123 - 128.

Rural/Metro, which is held out as a model of vigilant cost reduction.⁸⁴ Why can't the public sector, properly motivated and, if need be threatened, accomplish the same?

There's a second advantage to the process of contracting out: Evaluating the objectives, performance, and cost of the present service provided. Writing a contract forces the agency to be specific about its objectives. ("Repair defective traffic lights within 1 hour of notification" or "Fill potholes within a day of notification" is more operational than "Maintain a smooth flow of traffic.") It must further specify the expected performance level such as "Fill potholes with asphalt of given quality."⁸⁵ And it must cost out present operations and the true savings anticipated from contracting out.

The Costs of Contracting Out

As the prior paragraph implies, contracting out is not costless. Specifying contract terms, however, is not a recurrent act, and hence over time its costs are likely to be modest. A more lasting concern and hence continuous expense stems from the loss of control that contracting out entails. As pointed out in section III, fail-safe contract writing itself is a

⁸⁴ Rehfuss, p. 154. See Rehfuss, pp. 155 - 157 for the text of Rural/Metro's contract with Scottsdale, Arizona.

Rural/Metro's innovative approach has led to new staffing procedures that substitute part-time firefighters for the more-expensive full-timers and use the latter more creatively and intensively. It has also pioneered the employment of new equipment. Perhaps even more important has been its approach to fire prevention, including active pursuit of construction codes that reduce fire damage -- sprinklers in homes as well as commercial establishments -- frequent and comprehensive fire safety inspections, and educational programs. See Scottsdale Rural/Metro Fire Department, A Perspective on Progress (1991). Perhaps Rural/Metro is an exception that proves the rule. It is a relatively small company, with 1990 revenues of \$65 million, and is 60 percent employee owned. Hence, the principal-agent conflict may not achieve the significance it attains in larger privately-owned enterprises.

⁸⁵ See Edward C. Hayes, "Contracting for Services -- The Basic Steps," The Privatization Review, 2, 1 (Winter 1986), reprinted in Kemp, pp. 122 - 131. Hayes mentions a California municipality that had provided its parks' maintenance contractor with "a diagram of each shrub and tree ... by type and location, with size specifications drawn right on the diagram." (p. 128)

difficult and perhaps impossible task, since we humans cannot specify all possible contingencies that might arise in a world fraught with uncertainty. Incomplete contracting opens the door to apprehensions fomented by asymmetric information. Contractors will be better informed about options, costs, and performance, and, being opportunistic, will limit the quantity and quality of information conveyed to the contractees. Similarly, opportunistic private providers will try to cut corners wherever detection probabilities or penalties are insignificant.

Contracting out has a chance at lowering costs only if the potential contractors are sufficiently competitive, implying both adequate numbers and lack of collusion. Neither of these conditions can be taken for granted.⁸⁶ But if they are not met, the contracting out option loses its imperative. Assuming, then, that the competitive conditions are appropriate, the process costs -- administrative, technical, and legal -- begin to mount: eligibility conditions, contract specifications, bidding procedures, evaluation of bids, contract awarding, monitoring, enforcement, and recontracting.⁸⁷ While some of these steps involve initial investment costs, others are continuing outlays. The combination of contingent contracts and opportunistic behavior suggests that supervising a contracting out operation will not be

⁸⁶ Van Horn reports a significant proportion of the New Jersey government officials were troubled by the lack of competitiveness by contractors. "Concerns about 'unreasonable cost increases' were raised with respect to nearly half of the municipal contracts. County officials complained about cost increases involving nearly one out of every three private contracts.... Pricing practices by private firms operating within various sectors made it difficult for government agencies to obtain competitive bids on many large contracts." (p. 271.)

⁸⁷ See Rehfuss, Chs. 4 - 6. Some of the legal problems are discussed in Peter Thomas, "The Legal and Tax Considerations of Privatization," in Steve H. Hanke (ed.), Privatization and Development (San Francisco: Institute for Contemporary Studies, 1987), pp. 91 - 93. As there may be significant legal costs all along the way, since firms who did not win the contract can protest at each step of the process, this also suggests an array of costs associated with delays in providing the service.

insignificant. Monitoring becomes a major issue.

Monitoring

In truth, monitoring comes in a variety of guises. The effectiveness of monitoring depends on what is being monitored as well as how intensively such monitoring occurs. Some functions when contracted out will need minimal monitoring or can be monitored by the beneficiaries of the service.⁸⁸ Thus, a contract for maintaining street lights can rely upon the complaints of the public, requiring a small monitoring staff to assemble the reports and relay them to the contractor. That applies equally to fire control, garbage pickup, and street cleaning.⁸⁹ Would it also apply to monitoring water quality, vehicle repair, and road construction, where technical expertise is necessary? Clearly, we need to know more about the operation being monitored in order to evaluate the suitability of the monitoring.

Monitoring costs may be significant under the following conditions:

1. The product or service provided is difficult to evaluate. As just mentioned, it's easy to see if the street lights are off, but it's more difficult to discern if the concrete mix uses the specified proportions of cement and sand.
2. The product or service provided is inconsequential to the ultimate beneficiary.

⁸⁸ In "Congressional Oversight Overlooked: Police Patrols vs. Fire Alarms," (American Journal of Political Science, v. 28, no. 1 (1984): 166 - 179), McCubbins and Schwartz use this distinction to explain the Congressional monitoring process. Sometimes Congress exercises "police-patrol oversight," which is active and monitor-initiated. Other times, the legislature uses "fire-alarm oversight," which is passive and depends on those harmed to initiate complaints.

⁸⁹ Even such apparently obvious situations need to be thoroughly thought through. It is ill-advised to repeat the Oklahoma experience in which prison food quality was monitored by the inmates. Dissatisfaction expressed by burning down the prison might be carrying things a bit too far. See Harry P. Hatry, "Overall Findings and Recommendations," in Joan W. Allen *et. al.*, pp. 162 - 168. Hatry also notes: "Most agencies that tested the use of private sector assistance did not have adequate evidence on how costs or quality changed after they implemented the new approach." (p. 164)

Potholed urban roads are likely to generate more complaints and thus lends itself more to user reporting than long delays at the motor vehicle bureau license renewal window.

3. In sharp contrast, intensive monitoring is necessary when the poor compliance by the contractor can be (near) catastrophic (e.g. atomic energy plant construction and operation, hospital emergency care).

4. The provider is an owner-operated enterprise rather than a firm where management has little ownership stake. This paradoxical conclusion stems from the presumption that because the owner-operator is more opportunistic than are the managers of a firm who are not the principal beneficiaries of the greater profits, the former requires more intensive monitoring.

5. The contract is vague, so that contract compliance is always a source of friction between the monitors and the contractor. Vagueness made be unavoidable at first and may only be diminished with experience.⁹⁰ Note, however, that such saving in monitoring costs may be illusory. Costs are merely shifted to the earlier stage of contract specification.

In addition, we should add such instances where monitoring involves minimal outlay but has little value. Thus, when monitoring is infrequent and lacks integrity while the penalties for contract violation are insignificant or when the potential providers of the contracted product or service are few, so that contract violations are unlikely to lead to adverse consequences such as contract cancellation, then monitoring is a toothless exercise and all outlays on monitoring are wasted.

⁹⁰ The New Mexico state prison authorities became more specific in their food contracts as they learned from their mistakes in earlier contracts. See Joan W. Allen, "Use of the Private Sector in Corrections Service Delivery," in Allen, *et. al.*, p. 21.

However, the more stringent the monitoring process is, the greater is the contractor's incentive to bribe the monitor. Avoiding such collusion might require some type of incentive system for monitors and/or substantial and probable penalties for corrupted inspectors, costs that must also be included in the monitoring budget.⁹¹

VI. Conclusion

A number of practical conclusions emerge from this discussion.

1. Government cannot afford to contract out when the service in question is critical and would be contracted out to a single source. Aside from the private monopoly issue, the public should not be held captive to an irreplaceable supplier.⁹²

2. Governments ought to consider internal reform as a serious alternative to contracting out.

3. It will be easier politically and administratively to reform a government-owned commercial enterprise than a mainline government department. Hence, contracting out is more suitable for the latter than the former.

4. Even inefficient government operations may be less costly than contracting out

⁹¹ Monitoring against cost-saving contract noncompliance should not be an issue when the project remains in government hands. It surely matters not to a municipal work crew rebuilding a road whether they lay asphalt to the thickness of 1" rather than 7/8th of an inch. They do not profit from the saved paving material!

Certainly corruption is not limited to contracting out. Nor is it limited to public officials. Nevertheless, because corruption is intrinsic to monitoring and monitoring is less necessary under in-house service provision, the corruption problem is correspondingly reduced.

⁹² A New York Times article (February 29, 1992), under the headline, "E.P.A. Is Called Lax With Contractor," reported that the E.P.A. Inspector General had discovered that a single computer services contractor controlled most of the agency's information systems. Moreover, the Inspector General accused Computer Services Corporation of massive fraud. Representative Dignall stated: "The operations of E.P.A. are now totally dependent on Computer Sciences Corporation. Without this help, E.P.A. would shut down."

when monitoring costs are significant⁹³.

5. Government ought to search out operations for which contracting costs are likely to be small, and then open the contracting out process to the existing government operations as well as outside bidders.⁹⁴

6. Efficiency gains and cost savings will be most likely when the contractor itself has the technical potential and the incentive to seek out cost savings.

Although this article has implicitly stressed macrocontracting, microcontracting offers a better opportunity to achieve effective contracting out. A contract for prison food service and laundering is easier to monitor than is one that turns over the entire prison. Similarly, office services of various sorts -- from cleaning to security to repairing equipment on site to transporting employees and merchandise -- are more monitorable than is turning over the entire office or division to a private contractor. Furthermore, existing staff may be able to prove effective supervisors, obviating the need to assemble a separate monitoring bureaucracy. At the same time, microcontracts rarely involve crucial functions, and because of their limited nature are more apt to attract numerous bidders. Certainly they can spur internal efficiency and also cause less political resistance. And, because they are pervasive -- every office needs to be cleaned -- the opportunities for significant savings should not be underestimated.

⁹³ Unfortunately, this conclusion moves in a diametrically opposite direction to the contracting out movement in the U.S., which seeks to contract out those very services in which incomplete contracting is most evident, e.g., the justice and social welfare systems.

⁹⁴ U.S. federal government practice is to award the contract internally if external contractors are not cheaper by more than 10 percent. This presumably reflects a risk premium as well as lower monitoring costs. If so, it presumes too much. Ten percent probably understates average monitoring costs. Moreover, actual monitoring costs are unlikely to be constant over all contracts.