

**C.D. Howe Institute
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The Economics of Privatization

by

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Foreword

Privatization — the selling off of government-owned enterprises or the contracting out of government services — is sweeping the world.

At the core of this movement are experimentation, innovation, and a desire to get the most out of a nation's resources. Although Canada has participated in the privatization movement, it has not been at the forefront. With Ontario Hydro heading the list of possibilities, there are still many government-owned entities that could profit from closer scrutiny.

With this in mind, for the occasion of the 1997 Benefactors Lecture, the C.D. Howe Institute asked D.G. McFetridge, Professor and Chair, Department of Economics, Carleton University, to review domestic and international experience with privatization; to measure the successes and failures; and to draw lessons for the future.

In presenting the Benefactors Lecture this year, Dr. McFetridge extends the line of previous distinguished lecturers: John McCallum, Richard Harris, Richard Simeon, Thomas Courchene, and Richard Lipsey.

The C.D. Howe Institute's aim in presenting the Benefactors Lecture series is to raise the level of public debate on issues of national interest by presenting diverse points of view — whether or not it agrees with them — in publications that are well researched and well grounded. The Institute hopes that, in so doing, it will give Canadians much to think about, including the information they need to exercise their responsibilities as citizens.

I wish to thank our benefactor for this year's lecture, Dofasco Inc., and in particular its President and Chief Executive Officer, John Mayberry, whose support also enabled us to make copies of the lecture available free of charge.

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Thomas E. Kierans
President and Chief Executive Officer
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Introduction

Privatization has come a long way. From sterile Marxian discussions about social control of the commanding heights of industry to a general acceptance of the need to reinvent government is progress indeed. The emphasis on reinvention is important. When we think of invention and research and development, we think of the physical and biological sciences. The resources devoted to improving the design of social institutions have historically been relatively modest. Now, the environment has apparently changed, and governments of both the left and the right perceive a political payoff from organizational innovations that economize on the use of resources by the public sector. As a consequence, governments in various parts of the world are experimenting — selling off governmental enterprises that had hitherto been regarded as natural monopolies and contracting with nongovernmental organizations for the supply of services that had hitherto been regarded as the exclusive domain of government departments.

These experiments have shifted the center of gravity of the political debate over the role of government. The earnest arguments about the merits of government ownership of the steel industry, passenger airlines, or banks now appear quaint, even in the context of formerly interventionist economies.¹ Discussion centers on the problems of privatizing network industries and of contracting out for bundles of complex and difficult-to-measure social services, such as alcohol and drug rehabilitation and the design, construction, and operation of penal systems.² This shift is exciting for economists, as the design of efficient institutions and contracts is the very stuff of microeconomics, perhaps of economics in general.

Canada has participated in these bold experiments, although, perhaps typically, it has not been at the forefront. It has much to learn from

¹ “The state has no legitimate grounds for assuming control over business in the competitive sectors of the economy. Everyone recognizes this nowadays” (Balladur 1997, 54).

² For example, countries that have privatized their electricity supply industries, in whole or in part, in recent years include Argentina, Bolivia, Chile, Colombia, Costa Rica, Jamaica, Malaysia, New Zealand, Norway, Peru, Portugal, Spain, and the United Kingdom (see Bacon 1995).

international experience and also something to contribute. Privatization still has its critics.³ Not all experiments with privatization have been economically successful. Nor should we expect them to be. But very few were, in retrospect, not worth trying.

Privatization, which is part of a broader process of market liberalization, has implications for the efficiency of markets and the political process as well as for the efficiency of individual organizations. In this essay, I focus as nearly as possible on the consequences of privatization itself for organizational efficiency. More precisely, I attempt to distill and derive policy implications from recent Canadian and international evidence regarding the consequences for the efficiency of the organizations involved, of both privatizations of conventional government enterprises and various forms of public sector contracting out.

I proceed as follows. In the next section, I define privatization — not as easy a task as one might think — sketch the trends, and set out the rationales from several economic bases. Following, I examine the efficiency consequences of privatizations, drawing on studies that have used a variety of methods. In the next two sections, I examine evidence on two special kinds of privatization: public/private sector partnership and the use of nonprofit organizations. Finally, I offer some concluding thoughts on the overall idea of privatization.

Privatization Today

Believing one should be precise about a subject under examination (particularly a subject as broad as privatization), I start with some definitions. Then I describe some trends, worldwide and in Canada, and explore the kinds of efficiencies that may arise from privatization.

Defining Privatization

The term *privatization* covers a multitude of policy initiatives. At its most general, it can be defined as “a broad policy impulse which seeks to

³ For critiques of privatization, the privatization process, and postprivatization regulatory regimes, see Drohan (1996); Baumol (1993); Laux (1993); and Quiggin (1993).

change the balance between public and private responsibility in public policy” (Smith and Lipsky 1993, 188). In the public’s mind, the word has become associated with any situation in which a function formerly carried out by a government body is transferred to a nongovernment body, including some forms of deregulation wherein command-and-control regulations are replaced by market-style incentives, such as tradable permits or property rights.⁴

Until very recently, privatization was associated largely with the sale of real or financial assets by governments to the private sector. Specifically, the term referred to the sale to individuals and/or nongovernment enterprises of: (1) assets or a line of business of a government enterprise; (2) the government’s interest in a mixed (partly private, partly government-owned) enterprise; or (3) the government’s equity interest in a government enterprise (Crown corporation).

Among the prominent Canadian examples of the sale of assets or a line of business by a government enterprise have been the sale of the radio-chemical division of Atomic Energy of Canada Ltd. (AECL) as Nordion International (in 1991), the mainland natural gas division of British Columbia Hydro and Power Authority (in 1988), and Canadian National Railway’s (CN’s) trucking assets (CN Route, in 1986), hotel assets (in 1988), and interest in CNCP Telecommunications (in 1988) prior to the privatization of CN itself. Among the prominent Canadian examples of the sale of all — or virtually all — the equity interest in a government enterprise have been Air Canada (in 1988–89), CN (in 1996), and Petro-Canada (in 1991–97) by the federal government; Cameco Corporation (in 1991–96) by the federal and Saskatchewan governments; Telus Corporation (formerly Alberta Government Telephones, in 1990–91) by the Alberta government; and Nova Scotia Power (in 1992).

Privatization need not involve the sale of government assets or enterprises, however. In some cases, partial privatization is achieved by deregulation to remove restrictions on entry into a market, allowing nongovernment enterprises to enter it and compete with a government enterprise that has had a monopoly. The amount of the market retained

⁴ For example, a recent debate in the *Ottawa Citizen* about the merits of defining property rights in Atlantic codfish as a substitute for command-and-control resource management refers to such a shift as the privatization of the cod stock. (See Lavigne 1997, A13.)

by the incumbent government enterprise depends on its ability to retain its existing customers and attract new ones. An example of such partial privatization would be allowing suppliers other than Ontario Hydro entry into electricity generation in Ontario, as has recently been recommended. Another example is the introduction of privately owned liquor stores that may compete with government-owned stores in some provinces, such as New Brunswick. Another example is the provision for access by competitors to the state-owned railway systems of some European countries, such as Sweden and Germany.

Privatization also occurs when services supplied by a government enterprise or department are rationed and the private sector is able to supply a substitute. The increasing importance of private security services provides an example. So may the increasing importance of private duty nurses in hospitals. In the limiting case, a government enterprise exits a line of business, leaving it entirely to private sector competitors. This situation occurred recently when Canada Post stopped delivering third-class (“junk”) mail, effectively privatizing its delivery.⁵ Similarly, the Canadian Broadcasting Corporation (CBC) no longer bids for US prime-time television programming, thus privatizing the delivery of US sitcoms in Canada.

Privatization also occurs when government enterprises and government departments contract out certain functions. Public sector institutions routinely contract out janitorial services, maintenance services, food services, legal services, and accounting services. Hospitals may contract out laundry services, laboratory services, and even managerial services (although proposals to contract out the latter are frequently controversial). A recent and highly visible example of partial privatization by contracting out — actually franchising, in this case — some functions of a government enterprise has been the franchising of postal outlets by Canada Post.

Of course, contracting out occurs frequently in the private sector. Firms engage in a continual process of vertical integration and disintegration as they search for the optimal split between making and buying.

⁵ The Canada Post Mandate Review recommended further privatization of this nature in the form of Canada Post’s withdrawing from the provision of all courier services (Radwanski 1996, 86).

A lot of this passes without much public notice as, for example, when newspapers sell off their newsprint mills or paper-tissue makers their pulp mills. But what has become known as *outsourcing* — the process of buying an intermediate input or service from independent suppliers rather than producing it internally — can be controversial when it involves the replacement of union by nonunion workers (or members of a less militant union) or the replacement of domestic by foreign sources of supply. Some commentators also raise concerns that some companies have pushed outsourcing to the point at which they have become hollow (no longer able to accumulate skills, knowledge, and intangible capital in general internally).⁶

Governments have always contracted out some functions, the most notable being major construction projects. Indeed, Daniels and Trebilcock (1996) call this historic form of contracting out the traditional procurement model.

Contracting out should be distinguished from what have become known as *public/private sector partnerships*. Contractors are now not only building infrastructure but also designing, financing, and operating it. An example is the building and operation of prisons. Contracting for the supply of a complete package of services and infrastructure presents its own set of problems, which are analyzed in detail by Daniels and Trebilcock (*ibid.*).

Contractors themselves may take on a variety of organizational forms ranging from for-profit (investor-owned or private) enterprises to various forms of nonprofit organizations. Contracting out increasingly involves the latter, which are thought to avoid both the inefficiencies frequently attributed to government departments and the exploitation of market power associated with private enterprise. The nonprofit form has been employed in cases where competitive tendering is problematic because of either natural monopoly conditions (see my later discussion of local airport authorities and Nav Canada) or information asymmetries (often involving so-called trust goods, whose quality is difficult to measure). The problem of information asymmetries is particularly troublesome in contracting for the delivery of social services, such as rehabilitation.

⁶ See McFetridge (1989) for a discussion of hollow corporations.

The term *commercialization* is also used in discussions of privatization, where it is given a number of meanings. One refers to a situation in which a government department or enterprise is given a clear set of commercial, as opposed to public policy, performance objectives. Prominent examples of commercializations are the creation of British Telecom and Telecom New Zealand from the telecommunications divisions of the post offices in the United Kingdom and New Zealand, respectively; both operated as commercially oriented government enterprises (commercial Crown corporations) and then were privatized. A Canadian example is the conversion of the post office from a government department to a Crown corporation intended to operate on a breakeven basis.

Commercialization is also used to describe the creation of new nonprofit organizations to supply services formerly provided by government departments. An example is the formation of Nav Canada, a nonprofit corporation, to provide air navigation services formerly provided by Transport Canada (the federal Department of Transport). Such commercialization may be associated with decentralization of the organizations involved. An example of commercialization and devolution is the creation of nonprofit local airport authorities and, more recently, Canadian Airport Authorities to operate local airports formerly operated by Transport Canada in major centers.

Clearly, a continuum of relationships between governments and their suppliers exists. The optimal form of the relationship and of the governance structure that supports it depends on the nature of the services being supplied. The recognition that one size does not necessarily fit all institutional arrangements for supplying government services has led to considerable ongoing experimentation with alternate means of delivery. Indeed, there are more permutations of delivery arrangements than there are terms to describe them. For example, a recent report in the *Ottawa Citizen* stated that the national parks will not be “privatized” or “commercialized” (May 1997, A4). But it went on to say that a new organization, the Parks Canada Agency, will be contracting out maintenance and garbage collection, and apparently will place more emphasis on user-pay and cost recovery. This might qualify as a commercialization, but the term would be an emotive one in this context. The government has stated that park management itself will not be contracted out and the parks will not be “Disneyized” (ibid.).

Global Trends

Although privatization is a global phenomenon, it has tended to be concentrated in three groups of countries: developed countries, Latin American countries, and the transition economies (former communist countries). Measuring it is not easy, but clearly a vast amount is going on in these countries.

The Scale of Privatizations

One popular measure of the amount of privatization that is occurring is the proceeds of privatization — the money received by national governments from the sale of state-owned enterprises (see Table 1). Another measure is the number of state-owned enterprises sold.

Among developed countries, the acknowledged leader in the process has been the United Kingdom, although New Zealand has proceeded further in some respects. The asset privatization process in these two countries has largely run its course, but many other developed and developing countries are following suit. Australia has been aggressive in both conventional asset privatizations and contracting out, the latter being known in the Antipodes as *competitive tendering and contracting (CTC)*. Australian and New Zealand governments of both the left and the right have pursued asset privatizations and CTC initiatives (see Domberger and Hall 1996).

One of the largest privatizations ever occurred in Germany in 1996 when the initial public offering of Deutsche Telekom, a German telecommunications company, raised US\$13.3 billion, reducing the government's stake in the company to 74 percent (OECD 1997).⁷ Another very large privatization that occurred in Europe in the same year was a secondary offering of shares in the Italian oil and gas company ENI; it raised US\$5.9 billion and reduced the government's interest to just under 70 percent. France has also renewed its commitment to privatize its extensive holdings in industrial and financial companies (Balladur 1997).

⁷ The Japanese privatization of Nippon Telephone and Telegraph (NTT) in 1987 holds the title as the largest privatization ever. The sale of the first tranche of shares yielded US\$15.1 billion and the second and third tranches yielded \$40.3 billion and \$22.4 billion, respectively (Megginson, Nash, and van Randenborgh 1994, 416).

Table 1: Amounts Raised from Privatization, Various Countries, 1990–97

	1990	1991	1992	1993	1994	1995	1996p	1997e
	<i>(millions of current US dollars)</i>							
Australia	19	1,267	1,893	2,057	2,046	7,966	9,580	7,100
Austria	32	48	49	142	700	1,035	1,251	1,600
Belgium	—	—	—	956	549	2,681	1,221	900
Canada	1,504	808	1,249	755	490	3,803	1,762	2,000
Czech Republic	—	—	—	—	1,077	1,205	994	700
Denmark	644	—	—	116	2,815	12	382	100
Finland	—	—	—	229	1,166	363	911	100
France	—	—	—	12,160	5,479	4,136	5,099	5,300
Germany	—	325	—	435	240	—	13,273	2,600
Greece	—	—	—	—	—	—	529	1,500
Hungary	38	470	720	1,842	1,017	3,813	880	1,000
Iceland	—	—	21	10	2	6	—	—
Ireland	—	515	70	274	—	157	293	—
Italy	—	—	—	1,943	6,493	7,434	6,265	6,600
Japan	—	—	—	10,060	5,762	—	6,379	8,700
Korea (South)	—	—	—	817	2,435	480	1,849	1,700
Luxembourg	—	—	—	—	—	—	—	—
Mexico	3,124	10,754	6,866	2,503	766	170	72	1,900
Netherlands	699	179	17	780	3,766	3,993	1,239	600
New Zealand	3,895	17	967	630	29	264	1,839	—
Norway	—	—	—	287	118	510	660	200
Poland	62	338	240	734	642	1,516	495	3,500
Portugal	1,092	1,002	2,217	422	1,123	2,343	3,824	3,500
Spain	228	—	1,491	2,561	1,390	2,215	1,877	11,500
Sweden	—	—	378	252	2,313	852	785	1,100
Switzerland	—	—	—	—	—	—	—	—
Turkey	486	224	423	546	412	515	292	4,100
United Kingdom	12,906	21,825	604	8,523	1,341	6,691	6,695	3,300
United States	—	—	—	—	—	—	—	—
OECD total	24,729	37,770	17,204	49,032	42,171	52,162	68,449	69,600
Global total	29,808	48,183	37,049	73,008	60,282	77,220	87,929	99,600

Notes: Totals may not add due to rounding; 1996 data are preliminary, 1997 data are estimates.

Source: OECD 1997, table 1.

Among developing countries, a number in Latin America have had particularly notable privatization programs. Chile was a pioneer. It was followed by Mexico, which undertook a massive program of privatization during the 1990–93 period, and subsequently by Argentina and Venezuela (Gizang and Pacheco 1996). Chile has privatized all but 23 of its 524 state-owned enterprises since 1973, and Argentina is regarded as being well on the way to eliminating its state-owned enterprise sector (Kikeri, Nellis, and Shirley 1994, 248). In recent years, Brazil has maintained the largest privatization program of all developing countries, and this program promises to become still larger. The country has put its controlling interest in Companhia Vale do Rio Doce, the world's largest miner of iron ore, up for auction; that sale could ultimately raise US\$50 billion. Also to be sold are Eletropaulo, the electricity distributor in Sao Paulo, and Eletrobrás, an electricity-generating holding company; Eletropaulo sells 15 percent of Latin America's electricity, and Eletrobrás is among the world's top five power companies ("Let the Party Begin" 1997).

Significant privatizations have occurred elsewhere in the developing world (for example, in Colombia, Jamaica, Malaysia, Peru, the Philippines, South Korea, Taiwan, and Turkey), but they do not necessarily represent part of a sustained program to reduce the size of the state-owned industry sector in those countries.⁸ The poorer countries frequently have little that is fit to privatize (that is, attractive to investors) or too few politically acceptable (domestic) investors to sell it to. Nevertheless, there is pervasive international pressure on all but the poorest countries to deregulate and generally liberalize their economic policies. Some international agencies, such as the World Bank, have been quite insistent in this regard.

Privatization is occurring on a massive scale in former Soviet bloc countries as former state enterprises are sold to private investors. Indeed, of the more than 15,000 state-owned enterprises privatized worldwide between 1980 and 1992, more than 11,000 occurred in East Germany, which had the advantage of an already highly developed West German market and financial infrastructure (Kikeri, Nellis, and Shirley 1994, 247). In other transition economies, privatization presents a greater

⁸ For a discussion of privatization efforts in Argentina, Malaysia, Portugal, South Korea, and Thailand, as well as in France and the United Kingdom, see OECD (1996a).

challenge as it is part of a discrete change in economic systems. Supporting market institutions are only developing, and in some cases, governments themselves are not functioning particularly well.

Measures of Privatization

Conclusions regarding the international pervasiveness of privatization depend, in part, on the measure of privatization used. The proceeds of privatization offer only a gross flow measure. Because it does not reflect the net difference between sales of state-owned enterprises and purchases of new ones, it does not tell us the net change in the value of government enterprises (the change in the stock). Nor does it tell us the change in the relative importance of state-owned enterprise in a national economy.⁹ If a successful privatization program is defined as one that reduces the size of the state-owned enterprise sector by 20 percent, then only “a handful” of countries outside the former Soviet bloc would qualify (Jones 1996, 189).

The focus on the gross flow, rather than the stock, results in other anomalies in the measurement of the privatization phenomenon. Some countries have little to privatize either because the state-owned sector is small or because it is not attractive to investors. The United States does not show up at all, except for the privatization of Consolidated Rail Corporation (Conrail) in the 1980s. Conventional asset privatizations are not an issue in the United States because government enterprise has never been common there; relatively more emphasis goes to various forms of contracting with the private sector for the provision of government services.

A further measurement problem is in defining what constitutes a privatization. The mode of privatization differs from country to country, as does the latitude accorded newly privatized enterprises. The sale of a portion of the government’s ownership interest in an enterprise is unlikely to have the same effect on its management and performance as

⁹ According to a study that measures the proceeds of privatization relative to gross domestic product (GDP), Canada ranks eleventh of thirteen countries listed (United Nations 1995, 85).

the sale of the entire interest.¹⁰ Whether there is a threshold level of dilution of government ownership at which an enterprise can be regarded as effectively privatized is a matter of debate. One argument is that any sale of shares to the public is sufficient to ensure that commercial objectives will be paramount. On the other hand, even if the government's entire interest is sold, the terms and conditions of the sale may be such as to preclude substantial change in some aspects of the operation of the enterprise.¹¹

Canadian Trends

Canada has participated in the global process of privatization although it has not been one of the leaders. Stanbury (1994) tracks the history of government asset sales in Canada. Levac and Wooldridge (1997) list the largest federal and provincial asset privatizations (see Tables 2 and 3).

The extent to which Canadian governments have experimented with privatization varies. Some provinces continue to rely on the traditional Crown corporation model. In Saskatchewan, for example, telecommunications, electrical power generation and distribution, natural gas distribution, and automobile insurance are all served by monopoly Crown corporations. Intercity bus services and liquor wholesaling and retailing are also in the hands of government enterprises.¹²

In Alberta, in contrast, none of these industries is in government hands. The province has privatized telecommunications and liquor

¹⁰ The limited empirical evidence on this issue (Megginson, Nash, and van Randenborgh 1994) that complete privatizations result in greater increases in efficiency than partial privatizations. See my discussion later in the paper.

¹¹ Privatized Canadian Crown corporations have been encumbered with all sorts of restrictions with respect to the proportion of shares that can be held by any one individual or by foreigners, the composition of the board of directors, the location of the head office, and the continuation of certain operations in specified locations. The Air Canada privatization is a prominent example (see Laux 1993, 407). In addition to restrictions written into their corporate charters, newly privatized enterprises may also face continued restrictions from other sources. For example, the *National Transportation Act* imposes a 35 percent limit on foreign shareholdings in passenger air carriers in Canada.

¹² Saskatchewan has, however, sold its equity interests in potash, uranium, and forest products.

Table 2: Largest Privatizations of Federal Crown Corporations

	Sector	Year	Sale Proceeds ^a
			(C\$ millions)
Canadian National Railway (CN) ^b	Transportation	1995	2,079
Petro-Canada ^c	Oil and gas	1991	1,747
Nav Canada	Transportation	1996	1,500
Air Canada ^d	Transportation	1988	474
Teleglobe Canada	Telecommunications	1987	441
Canada Development Corporation	Financial	1987	365
Nordion International	Manufacturing	1991	161
Telesat Canada	Telecommunications	1992	155
de Havilland Inc. ^e	Manufacturing	1986	155
Canadair	Manufacturing	1986	141
Total		1986-96	7,218

^a Sale proceeds are net of commissions and other administrative costs associated with the sale. Proceeds raised by a corporation through offerings of treasury shares are not included.

^b Proceeds from the sale of shares in CN were received in two installments: \$1.219 million in 1995 and \$860 million in 1996. From the proceeds the federal government received in 1995, \$900 million was used to recapitalize CN by paying down debt owned by the railway.

^c Petro-Canada retained the proceeds raised through its initial public offering in 1991. The federal government sold 123.9 million shares in 1995, with payment in three installments: \$693 million in 1995, \$527 million in 1996, and \$527 million in 1997. The federal government continues to hold 18.3 percent of Petro-Canada's shares.

^d Air Canada retained the proceeds raised through its initial public offering of shares in 1988. The federal government sold its stake in Air Canada for \$474 million in 1989.

^e The federal government sold de Havilland to Boeing in 1986 for \$155 million. On closing, \$90 million was received in cash, and the remaining \$65 million was payable in installments over a 15-year period.

Source: Levac and Wooldridge 1997, table 1.

retailing and sold its interest in Alberta Energy Company, a natural gas production and transmission company.

In Ontario, despite considerable discussion of asset privatizations (especially with respect to electricity generation and liquor retailing), there has been little movement.¹³ The province has been considerably more active in exploring the opportunities for contracting out and private/public sector partnerships.

¹³ For a critique of the state of Ontario's privatization effort, see Corcoran (1997).

Table 3: Largest Privatizations of Provincial and Municipal Crown Corporations

	Sector	Owner	Original Ownership Stake	Year	Sale Proceeds
			(percent)		(C\$ millions)
Alberta Government Telephones ^a	Telecommunications	Alberta	100.0	1990	1,735
Manitoba Telephone Systems ^b	Telecommunications	Manitoba	100.0	1996	860
Cameco ^c	Mining	Saskatchewan	61.5	1991	855
Nova Scotia Power ^d	Electricity generation	Nova Scotia	100.0	1992	816
Alberta Energy Company ^e	Oil and gas	Alberta	100.0	1975	560
Syncrude Canada	Oil and gas	Alberta	16.7	1993	502
Edmonton Telephones ^f	Telecommunications	Edmonton	100.0	1995	468
Potash Corporation of Saskatchewan ^g	Mining	Saskatchewan	100.0	1989	388
Suncor ^h	Oil and gas	Ontario	25.0	1992	299
Vencap Equities Alberta	Financial	Alberta	31.0	1995	174
Total				1975–96	6,657

^a The initial public offering of shares in Alberta Government Telephones (AGT) in 1990 raised \$896 million. The Alberta government sold its remaining shares in 1991 for \$839 million. AGT was renamed Telus Corporation after it was privatized.

^b From the sale proceeds, \$450 million was used to recapitalize Manitoba Telephone Systems by paying down debt owned by the utility.

^c Cameco retained the proceeds raised through its initial public offering of shares in 1991. Through secondary share offerings, the Saskatchewan government raised \$75 million in 1991, \$49 million in 1994, and an estimated \$731 million in 1996. The provincial government continues to hold 10.3 percent of Cameco's shares.

^d From the sale proceeds, \$616 million was used to recapitalize Nova Scotia Power by paying down debt owed by the utility.

^e Alberta Energy Company (AEC) retained the proceeds raised through its initial public offering of shares in 1975 (which reduced the Alberta government's stake to 50 percent). The Alberta government received \$104 million in 1985 for shares sold to AEC for cancellation and \$456 million in 1993 through a secondary offering of the provincial government's remaining shares. From the sale proceeds received in 1993, \$273 million was transferred to the province's general revenue fund, and the remaining \$183 million was used to repay loans made by Alberta Heritage Savings Trust Fund to AEC.

^f Telus Corporation bought Edmonton Telephones in 1995.

^g Net proceeds are not available; the \$388 million reported represents gross proceeds from the sale, including commissions and other administration expenses.

^h Proceeds from the Ontario government's sale of 11 percent of shares in Suncor Inc. in 1992 were received in two installments: \$52 million received in 1992 and \$57 million in 1993. The provincial government sold its remaining shares in Suncor in 1993 for \$190 million.

Source: Levac and Wooldridge 1997, table 2.

Theory and Ideology

The arguments for the various forms of privatization discussed above have taken on a variety of forms. Some commentators favor limiting the role of government as a matter of principle (see, for example, “How to privatize” 1997). Others believe that resource allocation should be subject to democratic control and, for this reason, continue to favor government ownership (for an exposition, see Stanbury 1996).

Most individuals are more pragmatic and are inclined to favor the organizational form that “works best.” The question is what does work best? Experience should be our guide, but controlled experiments are difficult to run. As I detail later, even the best empirical studies are not particularly helpful as guides for public policy. Cross-sectional comparisons of private and state-owned enterprises have had difficulty isolating the marginal effect of ownership on enterprise performance.¹⁴

More recent studies comparing the performance of individual firms before and after their privatization are generally favorable to privatization. This body of work is increasing in size and influence, but it too has its problems. Even naive performance measurement is difficult (for example, rates of return may go up because assets are written down). Given that privatization is a social decision, it is the consequences for economic welfare (total surplus), rather than mere profit, that matter. Transfers should be netted out, and they can be subtle (see my discussion of the privatization of the Alberta Liquor Control Board in the next section). Privatization frequently occurs in conjunction with changes in the regulatory regime (such as the adoption of price-cap regulation in the United Kingdom and New Zealand). In addition, government enterprises are frequently subject to extensive internal rationalization before privatization, so the question arises as to whether the resulting productivity improvements should be attributed to privatization itself. After showing considerable technical wizardry in estimating the combined consequences of commercialization, privatization, and deregulation for productivity growth, some authors simply guess at the marginal

¹⁴ For example, there is ongoing debate about whether product market competition, private ownership, or both that drive organizational efficiency.

contribution of privatization itself (see, for example, Price and Weyman-Jones 1996, 36).

In sum, although the empirical literature is growing and becoming more sophisticated, there remains considerable scope for theory and for ideology in the formation of privatization policy.

Enterprise Commercial Efficiency

A widely held presumption (with some grounding in theory) is that the private sector is inherently more efficient than government enterprise and that this efficiency difference is more marked the more dynamic is the market involved.¹⁵ Economists argue what they call the property rights hypothesis: that the distinguishing feature of private ownership is that it allows for transferable residual claims on an enterprise, providing a financial incentive for individuals — specifically, inside shareholders — to take actions that increase the enterprise's value. In simpler terms, privatization allows the profit motive to work its wonders, which benefits the shareholders (residual claimants) of the enterprise involved and, provided a reasonable amount of competition exists, also benefits the economy as a whole.

Privatizations that take the form of management buyouts create a group of insiders, the owner-managers, with the ability to introduce improvements and reap their benefits in the form of dividends and capital gains. Other privatizations create widely held firms with no controlling shareholder group. (In some cases, even the emergence of a controlling shareholder is obviated by restrictions on the proportion of shares that can be held by an a single shareholder.¹⁶) Even here, however, the existence of tradable residual claims can improve managerial incentives for several reasons.

First, the market in shares creates an incentive to produce and analyze information on the performance of the firm involved, intelli-

¹⁵ Laffont and Tirole (1993, 639–645) summarize what they call the conventional wisdom with respect to the sources of the efficiency advantage of private ownership and discuss the extent to which that wisdom is grounded in economic theory.

¹⁶ Although restrictions on individual shareholdings may not preclude a situation in which several large shareholders (activist pension funds, for example) are able to function as an insider group by voting as a bloc.

gence that includes information on the strategic judgments of management, as well as more mundane data. This information is reflected in the price at which shares in the enterprise trade. That price reflects the judgment of informed outsiders about both managerial performance and the prospects for the enterprise in general.¹⁷

Second, the existence of tradable shares makes possible better managerial incentive arrangements involving various stock purchase and stock option arrangements. The value of these incentives to managers depends on the price of the company's shares, which depends, in turn, on the judgment of investors regarding managerial performance. (Incentives based on stock and stock option ownership are likely to be a considerable improvement over incentives based on sales or profit targets, especially in inducing managers to make long-lived investments.)

Government-owned enterprises may be at a further disadvantage in incentive contracting in that the government may not be able to commit itself not to expropriate the nonverifiable (hence noncontractible) investments made by the managers of the enterprise (Laffont and Tirole, 1993, 642–649). In the simplest terms, managers may, for example, be able to make nonobservable investments in their own skills that subsequently increase both profits and their own income. Private owners have no reason to intervene *ex post* to redeploy a manager's new skills to some activity that does not increase profits and raise income, but a government owner may do so for political reasons. Such a possibility may diminish the manager's incentive to acquire these skills, perhaps to the point where she makes no nonverifiable investment at all. This is another manifestation of the sovereign risk problem, wherein firms or individuals making specialized investments are vulnerable to opportunism on the part of the state. In this case, however, the problem applies to government enterprises, rather than to private firms. Moreover, it applies even if the *ex post* redeployment of managerial effort ordered by the government is socially beneficial.

¹⁷ Some continue to claim that the stock market is excessively short term in its perspective. Considerable empirical evidence now exists, however, that financial markets do not punish firms that make long-term investments. Moreover, the time horizons of government enterprises may reflect those of the political system, which may tend to focus on the next election. (See McFetridge 1995.)

Another source of discipline on private enterprise takes the form of what is called the bankruptcy or hard budget constraint. The absence of unencumbered or free cash flow coupled with the threat of bankruptcy is thought by some (for example, Jensen 1989) to limit the discretion of private sector managers in mature industries. Governments may find bankruptcy politically embarrassing, but they have the financial resources to forestall it. Having less fear of bankruptcy and the associated disruption of their careers, managers in government enterprises may devote less effort to controlling costs and scrutinizing investment decisions thoroughly.

Enterprise Political Efficiency

A somewhat more subtle analysis of efficiency differences between private and government enterprises recognizes that, although government organizations may be less efficient because of inadequate incentives for managerial efficiency, they may also supply a different mix of services. Government enterprises may supply political services directly or produce and supply commercial services on terms that reflect political considerations; either situation may involve any or all of choosing inefficient locations or technologies, overstaffing, and selling below cost to certain groups of customers (McFetridge 1986; Stanbury 1996). To put the point another way, management in a government enterprise may be maximizing political support rather than profits, and thus overinvest in activities that yield discernible benefits to voters or to political interest groups.¹⁸ For example, government-owned utilities tend to overinvest in spare capacity and in repair capability. The reason is clear. An interruption in service inconveniences customers who are likely to punish politically those they deem responsible.

The tendency of government enterprises to overdeliver on certain highly visible quality margins may cause problems for the privatization process in that customers will (correctly) complain that the privatized

¹⁸ In deciding whether to add spare capacity or more repair personnel, a commercially oriented enterprise compares the additional profits it would earn by reducing service interruptions (downtime) with the cost of the additional capacity or personnel. A government enterprise may start such a comparison with the additional profits *plus* the value of the additional political support it would receive.

enterprise has reduced quality. (Offsetting this falloff will be a decrease in cost plus possible increases in quality on less politically sensitive margins.)

In sum, the apparent inefficiency of government enterprise may be a consequence, at least in part, of the public policy role it performs. Of course, it is sometimes difficult to distinguish between inefficiency that is a consequence of the pursuit of public policy objectives and inefficiency that is the result of managerial slack. This blur makes it difficult to monitor the performance of government enterprises unless their functions are very simple. It may also be difficult to insist on efficiency along some dimensions when the enterprise in question is demonstrably inefficient along others.

Market Efficiency

Privatization is sometimes advocated as a means of increasing market or network efficiency (rather than individual enterprise efficiency) — say, to achieve the full benefits of the deregulation of a market. This point is hotly disputed.¹⁹ The essential question is whether the concepts of open access and open competition have much meaning when a major, if not the dominant, player in the market is owned by the government, cannot go bankrupt, and may be satisfied with very low rates of return. A version of Gresham's law may prevail wherein efficient firms are driven from the market or deterred from entering by a state enterprise that neither knows nor cares what its costs are. To some degree, this problem has burdened competition between Canada Post and private courier firms and between Canadian National and Canadian Pacific and the trucking industry prior to the privatization of CN.²⁰ The anticipation

¹⁹ There is a theoretical literature, summarized by Vickers and Yarrow (1988), that sees competition between state-owned and privately owned firms as not only possible but beneficial. The other view is that competition is inhibited as long as there is a significant state-owned firm in the market (see, for example, Beesley and Littlechild 1992).

²⁰ Radwanski (1996, 45) finds that Canada Post underestimated the incremental costs of some of its competitive services. If this error led it to price these services below their incremental costs, the result could be both inefficient and predatory. Radwanski also concludes that Canada Post has a "seriously unfair" advantage over its competitors based on its ability to "leverage a network built up with public funds" (p. 48). This situation may or may not be unfair, but it is not inefficient for Canada Post...

of a similar problem if free entry were allowed into electricity generation in Ontario led the Macdonald Committee (Ontario 1996) to advocate that the generation assets of Ontario Hydro be sold to a number of different firms (see also Grant 1977).

Privatization is also seen as a means of improving financial market efficiency (in the current jargon, “improving the financial infrastructure”). It facilitates the development of broader and deeper equity markets by increasing the number of individuals who hold shares in firms and the number of companies with shares traded on organized stock exchanges. Increasing the number of share-owning individuals was an important objective of the UK privatization program. Both France and Chile have made shares available to the employees of privatized enterprises at concessionary prices. European governments have belatedly recognized that the equity markets are important in the growth process and that they cannot be well developed if the shares of some of the largest firms in a country do not trade on them. (This view represents a remarkable about-face from the fascination that existed with “bank-centered” finance in the early 1980s.)

Political System Efficiency

In addition to improving enterprise and market efficiency, privatization may also improve political efficiency. Once completed, it reduces the number of items on the political agenda, thus allowing the political system to focus on the issues requiring the most input (fundamentally political issues), rather than issues that can be dealt with comparatively well by market governance (fundamentally commercial issues).²¹

Note 20 - cont'd.

...to leverage its network — that is, to take advantage of economies of scope, regardless of how its network was financed.

With respect to the complaints made against CN by its competitors, see Merkur (1996, 37).

²¹ Boston states that one of the arguments in favor of privatization in New Zealand was that “the sale of SOE’s [state-owned enterprises] and other state assets would give ministers and their departmental officials more time to focus on core government functions, such as the design and delivery of social services” (1992, 581).

The implication is that the span of management is limited in the political system as it is within private enterprise. Moreover, it may be narrowing in both the public and private sectors. The conglomerate form has been conspicuously unsuccessful, and the trend away from it is well documented. Indeed, leveraged buyouts and share repurchases are means by which private sector managers effectively shift or offload reinvestment decisions to their shareholders.

Privatization is also a means of effecting changes in instrument choice. Government enterprises that lose their public policy function or become demonstrably ineffective in achieving that function may become candidates for privatization. The public policy role of individual government enterprises is likely to evolve and, in some cases, to diminish over time (because the government's objectives change or because superior policy instruments are developed).

Given the presumption of the superior commercial efficiency of the private sector and a diminished or perhaps nonexistent public policy role, privatization appears to be an obvious outcome. The privatizations of Petro-Canada, Air Canada, and CN can be traced, at least in part, to their diminished roles as instruments of public policy.²² On the other hand, the recent Canada Post Mandate Review (Radwanski 1996) recommended against privatization, in part because it concluded that Canada Post still had a significant public policy role (deemed to include providing universal, single-price postal service; enhancing the presence

²² Petro-Canada was intended to engage in frontier oil and gas exploration and to be a window on the petroleum industry, which was subject to detailed government regulation under the federal National Energy Program (NEP). Petro-Canada lost that public policy function with the repeal of the NEP, and it turned out to be a poor window in any event.

Air Canada was central to a web of cross-subsidies to short-haul, low-density routes by long-haul, high-density routes. This system became increasingly costly to sustain and was swept away in the deregulation that occurred under the *National Transportation Act* of 1987. The airline was privatized two years later.

CN had also been central to a web of subsidization and cross-subsidization involving rail passenger transportation, grain transportation, and the operation of low-density lines. With the transfer of the passenger service to VIA Rail Canada (another Crown corporation), the placement of grain transportation on a strictly commercial footing (with the elimination of the Crow's Nest Pass rate), and the emergence of short-line railways, CN lost its public policy functions and was privatized in 1995.

and visibility of the federal government; and providing a means of accessing federal programs).

Changes in a government's objectives or its calculus of instrument choice may be, in part, a consequence of international treaty obligations or pressure from trading partners. Privatization in all countries has been encouraged by the negotiations of the General Agreement on Tariffs and Trade (GATT) leading to the formation of the World Trade Organization (WTO). Now, the WTO is increasing the pressure to eliminate nontariff barriers to trade, such as domestic subsidies and procurement restrictions, and is thereby reducing the public policy rationale for government enterprise, which has historically been an important instrument for protecting or subsidizing domestic industries and providing export subsidies. Government enterprises operating in markets for tradable goods and services, such as AECL and the Canadian Wheat Board, are increasingly vulnerable to countervail and other trade action. Governments everywhere are tending to distance themselves from enterprises that formerly served as instruments of industrial policy and to formalize their remaining relationships with them; prominent Canadian examples are Potash Corporation of Saskatchewan, Canadair, de Havilland, and Cameco.²³ Efforts to liberalize interprovincial trade within Canada may result in additional pressure on provincial governments to reduce the extent to which they rely on government enterprises to pursue such protectionist objectives as favoring local procurement.

Even so, there is inertia. The cost of government enterprise often takes the form of missed opportunities, rather than explicit losses. The privatization process can be economically, as well as politically, costly. The political interest group considerations that hobble a government enterprise may also infect the privatization process and rob it of any economic benefit. Often it takes the pressure from either imminent breakdown or foreign governments to move privatization up on the political agenda.

Ontario provides good examples of both types of forces. In the case of Ontario Hydro, political attention is such that partial privatization in the form of open access to the transmission grid by private Canadian or

²³ It is also arguable that the privatization of CN was necessary if it was to fulfill its aspirations of becoming a North American railway.

foreign producers of power appears to be unavoidable. The case of the retailing and wholesaling activities of the Liquor Control Board of Ontario (LCBO) does not have the same political urgency. The Alberta experience (detailed below) indicates that privatization of provincial liquor monopolies is likely to result in modest aggregate economic gains (more locations and increased varieties, especially of fine wines in some stores) but also significant wealth transfers, most notably away from the existing employees. The constituency likely to gain from privatization (some consumers, potential store operators, and potential employees) is widely dispersed, while those with something to lose (existing LCBO employees) are concentrated and their losses would be relatively large.

The Efficiency Consequences of Privatizations

As already suggested, the literature on privatization is becoming a crowded field. There are two major classes of studies. One is contemporaneous cross-sectional comparisons between private and state-owned enterprises; the other is before-and-after privatization studies.

Private and State Enterprise Efficiency

A vast number of studies compare the performance (productivity, profitability, and so on) of private and public enterprises operating in the same industry at a given point in time. Well-known comparisons involve railways, such as CN and CP, electric power utilities, water utilities, gas utilities, and ports, among others.

These studies are frequently unable to distinguish between private and government enterprises on the basis of their productivity performance. For example, the work of Caves and Christensen (1980) is often cited as contradicting the property rights hypothesis by implying that product market competition, rather than ownership, drives performance. In fact, although Caves and Christensen's results do not support the property rights hypothesis, they have little to say about the impact of competition on performance. They compare total factor productivity (TFP) levels and growth rates of CN, a government enterprise, and CP,

a private enterprise, over the 1956–75 period. They find that CP's TFP was higher than CN's in 1956 (supporting the property rights hypothesis), but that the private railway experienced slower TFP growth over the sample period (contradicting the property rights hypothesis). As a consequence of its higher TFP *growth rate*, CN's TFP *level*, drew equal to CP's in 1967 and surpassed it thereafter. Caves and Christensen incorrectly attribute CN's higher productivity after 1967 to provisions for modestly increased intramodal competition in the *National Transportation Act (NTA)* of 1967. CN's higher productivity after 1967 was, in fact, due to a process of catchup that had begun at least 11 years before the passage of the *NTA* (Lall 1992, 19–27). This fact does not, however, rule out the possibility that intermodal competition intensified prior to or early in the sample period, which may have forced CN to be as innovative as CP.

Another study (Tretheway, Waters, and Fok 1994) covers a longer time period and finds that CN's and CP's rates of TFP growth were virtually identical over the 1956–91 period. The implication is still that CP was the more productive railway. The study also finds that CN had a higher rate of growth of labor productivity but a lower rate of growth of capital productivity than CP, implying that the government enterprise, perhaps with a lower perceived cost of capital, invested more heavily than the private enterprise.

A large number of studies compare the efficiency of private and government-owned water utilities in the United States. A survey of these studies by Bhattacharyya, Parker, and Raffiee (1994) concludes that they do not support the hypothesis that privately owned water utilities are more efficient than government-owned water utilities. The authors go on to compare the efficiency of 225 public and 35 (regulated) private US water utilities, using data for the year 1992. They find that the private utilities were less efficient than the government-owned ones. In another study which uses the same data but a different statistical methodology, Bhattacharyya et al. (1995) find that government-owned water utilities are more efficient than private utilities in the sense of having a lower unit variable cost, but that this is not true for the smallest utilities. They attribute the relative inefficiency of the private utilities, in part, to excess capacity (unexploited returns to density) and suggest that regulation is likely a contributing factor (but give no examples).

They also note that, contrary to conventional wisdom, the private utilities overused labor relative to the government-owned utilities.

Liu (1995) conducted a pooled time-series cross-sectional statistical comparison of the levels of efficiency of 28 privately operated and government-operated (trust or municipal) ports in the United Kingdom over the 1983–90 period. After taking port size and location into account, he finds no difference in productivity between the government and the privately operated ports.

Many studies compare the efficiency of government-owned and privately owned electrical utilities. Peters surveys the results of 60 studies published between 1966 and 1988, finding that the government-owned utilities were more efficient in 19 cases, the privately owned utilities were more efficient in 25 cases, and there was no difference in efficiency in 16 cases (1993, 600).

More recent studies of electricity generation and distribution by Pollitt (1995; 1996) come to similar conclusions. Pollitt (1996) compares the efficiency of government and privately owned (“investor-owned”) nuclear generating plants in the United States and the United Kingdom, using data for 1989. He finds that, given vintage, reactor type, and load, there was no difference in efficiency between the two kinds of ownership.

Pollitt (1995) compares the efficiency of 95 government- and investor-owned thermal generating plants (coal, oil, gas, wood) in eight countries, using data for 1989. Depending on the statistical method he uses, he finds little or no difference in efficiency between the two groups of plants. He then compares 768 investor-owned and government-owned thermal generating plants in 14 countries, again using data for 1989, and finds no significant difference in efficiency between the two groups once load factors, age, technology, and country are taken into account.

Pollitt’s next comparison uses 160 investor-owned and government-owned baseload generating plants.²⁴ In this case, he finds the investor-owned plants were significantly more efficient than the government-owned plants, the inefficiency of the latter being a consequence of their tendency to choose a generating technology that makes intensive use of a relatively expensive input rather than one that makes

²⁴ As opposed to plants that operate only at peaks of demand.

greater use of less costly inputs. Pollitt attributes this inefficiency to government interference with the investment decision and technology choice (pp. 187–188).

Pollitt's final comparison involves transmission and distribution utilities in the United States and the United Kingdom. He finds no average cost difference between investor and government ownership once scale, service area, and local wage rates are taken into account.

Overall, is privatization likely to reduce the costs of electricity generation and transmission? Pollitt concludes:

Our evidence suggests that the answer to this question is yes for electricity generation in the long run, as better investment planning leads to lower operating costs. However in the short run, given existing technology, we cannot expect privatization to lower costs. We find no evidence for expecting lower costs in the transmission or the distribution functions in the short run or the long run. In the [electricity supply industry] as a whole it is likely that the biggest gains are from restructuring and better government management of state owned electricity assets. (1995, 189.)

Before-and-After Privatization Studies

As experience with privatization increases, it has become possible to do increasingly sophisticated studies of the consequences of privatization, examining its effects on prices, quality, and variety, as well as on productivity and profits. A summary quantitative measure of these effects is the net welfare effect of privatization: the sum of the changes in profits, consumer surplus, and rents to input suppliers. Increasing profits by increasing price results in an offsetting reduction in consumer surplus with no increase (probably a decrease) in welfare. Similarly, increasing profits by reducing wages results in an offsetting decrease in rents (wages in excess of opportunity cost) to workers and a smaller (if any) increase in welfare.²⁵

²⁵ Assuming, for example, an elasticity of demand for labor of one, a 20 percent reduction in wage rates yields a 2 percent increase in welfare.

Multicountry Studies

A World Bank conference volume edited by Galal and Shirley (1994) summarizes the results of one set of before-and-after studies of privatizations in Chile, Malaysia, Mexico, and the United Kingdom. In 11 of the 12 cases examined, privatizations resulted in net welfare gains, which averaged 26 percent of the preprivatization revenue. In none of these cases were workers made worse off (possibly because the employees involved were reasonably highly skilled and had bargaining leverage). As one contributor (Jones 1994, 94) comments:

We found not a single case in which divestiture made workers worse off. In a number of cases workers did better whether through higher wages or through share purchases in the privatized company. Even after making adjustments for workers who lost their jobs (taking into account their severance pay, expected time out of work, and expected earnings when they go back to work), we found no case in which employees overall are worse off as a result of divestiture.

For the portion of the project devoted to the United Kingdom, Vogelslang (1994) reports the results of studies of the privatizations of British Telecom (in 1984), British Airways (in 1987), and National Freight (in 1982). His conclusion in each case is that privatization resulted in welfare gains. These accrued to consumers, shareholders, and the government in the case of British Telecom, to shareholders and the government in the case of British Airways, and to employees in the case of National Freight.

Galal (1994) summarizes the welfare consequences of three Chilean divestitures — a telecommunications utility and two electricity supply utilities. In the case of the Chile Telecom divestiture, shareholders (including employee shareholders) and consumers realized huge gains as a result of the relaxation of the investment constraint the company had faced as a governmental enterprise. The two electrical utilities had been well run prior to privatization, so the gains from privatization were modest.

Tandon (1994) reviews the welfare consequences of three Mexican divestitures — two airlines and a telecommunications utility. The analyst finds that the privatization of one airline, Mexicana Airlines, had negative consequences arising from mistaken investment decisions (principally in aircraft) that the new owners made and borne mostly by

them. The privatization of Aeromexico yielded large productivity gains (facilitated by a preprivatization declaration of bankruptcy) but also resulted in higher fares; on balance, there was a net welfare gain. The privatization of Teléfonos de México (Telmex) and the associated introduction of price-cap regulation also yielded a net gain, due largely to increases in labor productivity and TFP. Employees, government, and foreign shareholders all gained substantially; consumers, however, experienced large offsetting losses due to price increases.

Meggison, Nash, and van Randenborgh (1994) offer another cross-country before-and-after study of the consequences of 61 privatizations that occurred before 1990. These authors examine the effect on profitability, productivity, capital investment, output, and employment, although unlike the analysts in the Galal and Shirley (1994) volume summarized above, they do not attempt to estimate the aggregate welfare effects of these privatizations. They find increases in profitability, especially for firms operating in competitive industries, in efficiency (sales per employee), and in capital investment for firms in competitive industries and for full divestitures and control privatizations but not for firms in noncompetitive industries, partial divestitures, or revenue privatizations. They report increases in output and employment and decreases in leverage (the debt-to-assets ratio) after privatization. Their general conclusion is that privatization enhances performance across the board (with the exception of capital investment), but the performance improvement is more marked when more than 50 percent of the firm's directors turn over after privatization.

Studies of the United Kingdom

Eckel, Eckel, and Singal (1997) assess the British Airways privatization and find that it had a procompetitive effect. The authors use event-study methodology to estimate the effect that the announcement of the privatization had on the stock prices of rival carriers. They find that both the 1986 announcement of government approval of the privatization and the airline's 1987 issuance of a prospectus had a statistically significant negative effect on the returns of rival carriers on North Atlantic routes, the negative effect on its closest rival, Pan American World Airways, being the largest. Eckel, Eckel, and Singal interpret these results as

implying that the stock market expected British Airways to be a more efficient and more aggressive competitor after privatization.

In contrast, the authors say, the appointment of John King as chairman of British Airways with a mandate to make it more efficient and prepare for its ultimate privatization had a positive but statistically insignificant effect on the share prices of rival carriers. The implication is that it was a privatized British Airways, rather than a more efficient government-owned British Airways, that was perceived as a competitive threat to rivals.

Eckel, Eckel, and Singal (1997) also use the conventional measures of performance to examine the effect of British Airways privatization. They find that it reduced fares on routes served by British Airways relative to similar routes that it did not serve. They also find that partial productivity measures, such as employees per revenue passenger mile (RPM) and cost per RPM, improved relative to the rest of the industry after privatization.

As a check on their results, the analysts estimate the announcement effect of Air Canada's privatization on publicly traded US carriers and find none, an absence they attribute to the limited competition between Air Canada and these carriers. After the sale of the second and controlling tranche of Air Canada's shares, however, fares fell by 13.7 percent on the routes it served relative to a control group of routes. They interpret this finding as implying that transfer of control was necessary for efficiency gains to be realized.²⁶

Parker and Martin (1995) attempt to measure the effect of 11 major UK privatizations, carried out between 1981 and 1988, on the growth rates of labor productivity and of TFP of the enterprises involved.²⁷ They find that, on average, the annual growth rate of labor productivity relative to the economy as a whole was 5.0 percent during the four years before the announcement of privatization but 2.8 percent during the four years immediately afterward. The latter average is, however, skewed by

²⁶ This conclusion seems somewhat forced in that the conditions of privatization were such that Air Canada became a management-controlled, as opposed to shareholder-controlled, firm.

²⁷ British Airways (in 1987), British Airports Authority (in 1987), Britoil (in 1982), British Gas (in 1986), British Steel (in 1988), British Aerospace (in 1981), Jaguar (in 1984), Rolls-Royce (in 1987), National Freight (in 1982), Associated British Ports (in 1983), and British Telecom (in 1984).

some very large decreases in productivity growth at Jaguar and British Steel and a large increase at Associated British Ports; a majority of the 11 enterprises had faster labor productivity growth in the postprivatization period.

Price and Weyman-Jones (1996) estimate the rate of productivity growth in the UK gas industry between 1977, when the switch to natural gas occurred, and 1986, when British Gas was privatized and from 1986 to 1991. They find that “privatization is associated with a doubling of the rate of productivity growth in UK natural gas supply” (p. 36). They also find that that rate of productivity growth began to increase prior to privatization, and suggest that the abolition of British Gas’s legal monopoly in 1982, as well as the preparation of the company for privatization, may have been responsible. They also suggest that the substitution of price-cap regulation for the vague mandates that had been given nationalized enterprises also played a role in the acceleration of the rate of productivity growth.

In an earlier paper, Button and Weyman-Jones (1994, 30) conclude that the institution of price-cap regulation as a “high powered incentive contract” was the “major cause” of the acceleration of productivity growth. In this paper, which reports a comparison of the productivity growth rates of 12 UK electrical distribution utilities before privatization (in 1971–90) and after privatization (in 1991–93), the analysts find that, on average, there was no change in the rate of productivity growth, a phenomenon they attribute to lax price-cap regulation (allowing for real price increases) and to the recession that occurred after 1990.

Hunt and Lynk (1995) examine the effect of the 1989 privatization of ten regional water authorities (RWAs) in England and Wales on the efficiency of the UK water industry. The RWAs had practiced integrated river basin management, which effectively combined environmental and water conservation functions (pollution, fisheries, flood protection, land drainage, and water recreation) with water and sewerage supply. With privatization, the environmental and water conservation functions passed to a set of independent regulators,²⁸ and the privatized companies focused on water treatment and distribution and sewage collection

²⁸ The regulators include the National Rivers Authority (river quality), the Drinking Water Inspectorate, Her Majesty’s Pollution Inspectorate (industrial effluent), the Ministry of Agriculture, Fisheries and Food (sewage disposal), and the Office of Water Services (economic regulation).

and treatment. The economic regulatory structure experienced problems, some of which were inherited from the era of government ownership. New investment was essential, and rates had to be raised to make it worthwhile. There was an intense and familiar debate about the cost of capital. There were also familiar problems in separating the companies' water from their other business activities.

Hunt and Lynk find that with privatization came a loss of strong complementarities (economies of scope) between the water supply and environmental management functions of the RWAs. The authors do not estimate the benefits of privatization, which they think takes the form of improved service to consumers and increased exploitation in other markets (Canada, for example) of the privatized companies' knowledge of water supply. They suggest, however, that these benefits must be very large to overcome the diseconomies resulting from the separation of the various water management functions.

New Zealand

Boles de Boer and Evans (1996) investigate the efficiency and welfare consequences of the commercialization (in 1987), deregulation (in 1989), and ultimate privatization (in 1990) of Telecom New Zealand. This privatization was subject to conditions embodied in a "Kiwi share" requiring free local calling, a price cap on line rentals, and no urban-rural price discrimination. The authors find that, over the 1987–93 period, TFP increased at an annual rate of 9.5 percent, which is high by any standard. A consequence of this increase in productivity was a decrease in marginal cost, which led, in turn, to lower prices with no reduction in quality. Lower prices, together with the elimination of nonprice rationing, resulted in significant increases in consumer surplus. Indeed, the entire welfare gain from commercializing, deregulating, and privatizing Telecom New Zealand accrued to consumers of telecommunications services (*ibid.*, table 1). While the authors' analysis indicates that all the productivity gains realized by Telecom were passed on in the form of lower prices, the price of its shares also rose after privatization, implying that shareholders also gained.²⁹

²⁹ In his analysis of the privatization of Telecom New Zealand, Quiggin (1995, 37) concludes that the price at which it was sold was roughly equal to the present value...

Regarding the respective contributions of privatization, deregulation, and competition to the observed increase in welfare, Boles de Boer and Evans conclude:

It is difficult to separate the effect of deregulation and competition from that of privatization in our study. While potential competition was recognized by Telecom as an SOE [state-owned enterprise] in the 1980s, to the extent that it may have affected investment decisions, the full import of competition was graphically brought to light by the rapid acquisition of toll market share by Clear Corporation soon after Telecom was privatized. Certainly the entry of competition directly and immediately affected the incumbent's pricing.

There have been productivity gains throughout the period, but the data...suggest that productivity gains since privatization have been at least that of the SOE period.

The competitive environment may have contributed to productivity gains. The measured productivity growth of Telecom exceeds the range of technical rates of change reported...for British Telecom following privatization. Although this company has had access to the same technology, it has functioned in a much more regulated and, until recently, protected market. The comparison between Telecom and British Telecom is suggestive that the absence of both regulatory barriers to entry and concomitant price regulation may have stimulated productivity growth over that of a more regulated industry environment. (1996, 33-34.)

Two Canadian Case Studies

The Canadian experience also offers interesting possibilities for before-and-after case studies of privatizations. Two that have attracted much attention are the cases of the Alberta Liquor Control Board (ALCB) and Canadian National Railway Company (CN).

Retail Liquor Store Privatization in Alberta

Between September 1993 and March 1994, all the liquor stores of the ALCB, a provincial monopoly, were closed and subsequently sold,

Note 29 - cont'd.

...of the annual level of preprivatization profits forgone and that, in this sense, taxpayers did not lose from the privatization.

either to reopen as privately owned liquor stores or in other uses.³⁰ Prior to privatization, the ALCB operated 205 retail stores; by November 1994, 535 private retail liquor stores had opened in the province.³¹

The privatization model Alberta adopted stops considerably short of a free or unrestricted market because

- Liquor is to be sold separately from foods or other beverages. The liquor retailing operation must be physically separated from other retailing activities (walled off with separate entry, receiving, and storage). The intention is to exclude supermarkets from liquor retailing.
- The ALCB retains its role as the sole wholesaler of liquor in the province. Wholesale prices are the same to all retailers. Individual retailers are not allowed to negotiate discounts from manufacturers and are effectively barred from receiving other inducements. ALCB delivery charges are the same regardless of the location of the retailer. There are no restrictions on retail pricing. Retail advertising is permitted, but cooperative advertising is not.

These restrictions likely have several consequences. First, potential economies of scope in retailing liquor, wine, and related food and beverage items cannot be fully realized. Second, the chain store form of operation offers little in the way of its usual logistical benefits (economies of purchasing and shipping large volumes). Third, retail prices are unlikely to differ much between urban and remote rural locations.

The ALCB privatization has, however, had significant effects on employment and wages in liquor retailing, as well as on store locations and varieties available. Other issues that are typically of concern in Canadian discussions of the privatization of liquor merchandising are its effects on retail prices and tax revenue and on the availability of alcohol to minors.

West estimates that liquor store employment has approximately tripled since privatization (1996, 75). At the same time, the average wage paid by private liquor stores is roughly half the top-of-the-scale rate the ALCB formerly paid its clerks.

³⁰ The bulk of this discussion is drawn from West (1996).

³¹ In the case of rented stores, leases were either surrendered, terminated, or assigned.

The privatization has markedly increased the number of liquor stores — by 134 percent between 1993 and 1995 (*ibid.*, 32). The number of communities served by liquor stores has increased, and store density has risen in the central areas of Edmonton and Calgary. But sales per store have declined considerably, especially in those cities.

Product selection has generally increased province-wide. Although the average number of varieties available in stores in Calgary and Edmonton declined, the largest private stores in both cities now offer more variety than the largest ALCB stores offered before privatization (*ibid.*, 49–51). West finds that retail prices increased by 8.5 percent between January 1993 and January 1996 — roughly 4.0 percent in real terms.³² As of January 1996, those prices were roughly 2.0 percent higher in Alberta than in either British Columbia or Ontario but lower than in Saskatchewan. In addition, the liquor-tax revenues received by the government of Alberta have remained roughly unchanged since privatization (*ibid.*, 66–70).

Insofar as the social consequences of privatization are concerned, West finds that the province has suffered no rise in liquor-related traffic offenses and no increase in the likelihood of a liquor store's being robbed. He also surveys the conflicting evidence on the consequences of liquor store privatization in Iowa and West Virginia for heavy and problem drinking. He concludes that Alberta's postprivatization experience is insufficient to draw firm conclusions but sees the preliminary indications as implying that there will be no increase in problem drinking (*ibid.*, 87).

To summarize, privatization has brought Albertans more liquor stores and greater product variety, although not in every store. The wages of liquor store employees have fallen, but employment has risen. There is now the kind of excess capacity in liquor retailing that is familiar in other types of retailing and consumer service businesses.

Clearly, the Alberta government structured the privatization so as to favor single-store operations, exclude supermarkets, entrench freight absorption on shipments to rural customers, and preserve its tax take.

³² Since consumer transportation and shopping costs are likely to have fallen due to increased store density, "delivered" prices to consumers will actually have risen less and may have fallen.

The structure of the market reflects the political goals of encouraging small business and providing implicit subsidies to rural residents. The losers were the former ALCB employees.

Canadian National

In November 1995, the government of Canada privatized CN, a move that would be regarded as a bold one by international standards if it had not been under discussion for more than 15 years (Merkur 1996, 36). Nevertheless, from a Canadian perspective, this privatization was remarkable in a number of respects. The government sold its entire interest in the company all at once. It did not retain a minority interest or a golden share. And despite placing a 15 percent limit on individual shareholdings, it imposed no foreign ownership or voting rights restrictions. (Indeed, Goldman Sachs, a US investment dealer, co-managed the share offering, the shares were listed on the New York Stock Exchange, and the share offering was promoted in a number of US cities. Although employees had a share purchase plan, the takeup among them was relatively small.)

The share offering was regarded as successful both in that it yielded approximately \$2 billion for the federal government and in that it was vastly oversubscribed and the price of the shares rose after they were issued. Although this rise might also be taken to imply that the issue was underpriced, others maintain that, given its historic performance, the CN share offering was not underpriced.

CN now has a significant body of US shareholders, who may be contributing to the speed of the ongoing rationalization of its operations and its pursuit of plans to become a North American railway.³³ Michael J. Sabia (1997), CN's executive vice-president and chief financial officer, emphasizes, however, that the enterprise had effected a considerable improvement in its operations in the three years prior to its privatization. Organizational changes introduced, he says, had included the appointment of a "real" (nonpolitical) board of directors, performance-related managerial compensation, and modification of "Dickensian" labor agreements.

³³ Close to two-thirds of CN's shares are now held by foreign investors (Merkur 1996, 50).

Regulatory accommodation has also been helpful in facilitating ongoing rationalization. The 1993 report of the NTA Review Commission (Canada 1993) had noted that both CN and CP were burdened by excess capacity and that the rail line abandonment procedures in the 1987 *National Transportation Act* were too cumbersome. The 1996 Canadian Transportation Agency (CTA — the old National Transportation Agency renamed) streamlined these procedures, and a significant transformation of both CN and CP is under way.

The way for CN's privatization was also smoothed by a series of divestitures and financial arrangements with the federal government that focused the company and reduced its debt load. Ottawa effectively absorbed \$1 billion in CN debt. CN divested itself of its hotel, telecommunications, and trucking interests, but its railway operations remained intact. This was in marked contrast to the restructuring of British Rail, which was broken up into an infrastructure company, various freight and passenger companies, a rolling stock company, and a maintenance and engineering company before privatization.

CN's divested trucking operation, CN Route, went into receivership in 1988. It is argued in some quarters that this privatization failed and that CN was responsible in that it did not take sufficient care in finding a competent, well-financed buyer (see Brewster 1997). Another perspective is that the opportunity cost of the land and facilities was such that the windup value of CN Route was simply greater than its value as a going concern.

Although the seller of a business cannot be expected to exercise continuing control of that business beyond the grave and employees have no particular stakeholder rights beyond those embodied in their employment contracts, experience with politically popular privatization programs is that they do make whatever provisions are possible to ensure the future of the employees involved.

The CN experience is illustrative in a number of respects. As already observed, its performance had improved markedly while it was still under government ownership. Its rate of TFP growth was virtually indistinguishable from that of its privately owned competitor, CP. In the words of its chief financial officer (Sabia 1997), it had become "good enough" under government ownership. At the same time, however, CN had ceased to be a significant instrument of public policy. The govern-

ment had found another instrument, VIA Rail Canada, to deliver subsidized passenger rail travel, and it had moved from cross-subsidization to direct subsidization to no subsidization of grain transportation. Both CN and CP continued to be regulated, although regulation was increasingly confined to the protection of captive shippers, and there is no indication that the government-owned railway was any easier to regulate than the private one.

Thus, if government ownership was not particularly harmful, it was certainly redundant. Privatization at a remunerative price was simply the logical next step in a lengthy process of commercialization.

General Assessments

A number of analysts have made recent general assessments of the privatization efforts of the United Kingdom, New Zealand, and some other countries. Miller (1995) reviews 25 studies of privatization in the United Kingdom. Of the 17 that assessed its efficiency consequences for the enterprise involved, 12 found them to be positive, 2 mixed, and 3 negative. Of the 14 that assessed the extent to which privatization improved service, quality, or variety or lowered prices, 11 found the consequences to be positive, 1 mixed, and 2 negative.

Utility privatization in the United Kingdom has not been without problems. There have been problems with the postprivatization market structure, British Gas having been a vertically integrated monopoly and electricity generation initially being a duopoly with high barriers to entry. Privatized water utilities had to compensate for years of underinvestment and face public hostility to the idea of pricing water use (Button and Jones 1994).

Quiggin (1995) argues that privatization in general — the UK privatization program in particular — is misguided and has not been beneficial. He gives two essential reasons. First, in his view, rationalization, elimination of restrictive work rules, productivity improvements, and related regulatory reforms (including the introduction of competition) could have been effected without privatization. Second, the UK government sold its shares at excessively low prices, thus reducing its income and requiring either a cut in service or a tax increase to compensate.

Conclusions

The studies I have described permit at least three important conclusions.

Efficiency Effects

The marginal effect of privatization on enterprise and market efficiency is difficult to determine. Privatization is part of a broader process of market liberalization. The weight of the evidence is that, taken as a whole, this process has been efficiency enhancing.

Privatization generally involves more than a change in ownership of a government enterprise. It is frequently the culmination of a series of policy changes that may include the commercialization of a government department or enterprise and either regulatory forbearance or adoption of a more transparent regulatory regime. This process can be regarded as successful if it yields a welfare gain, which is an increase in surplus *with transfers netted out*. In the simplest terms, the focus must be on productivity, broadly measured.

Contemporaneous comparisons of the productivity performances of private and government enterprises generally find no difference between them. Before-and-after comparisons, however, generally find a performance improvement of some kind; it is a productivity or welfare improvement in a significant number of cases.

One reason that the two kinds of studies tend to differ in their conclusions is that the contemporaneous comparisons frequently involve government enterprises and *regulated* private enterprises. Regulation may attenuate the incentive advantages of private ownership. Moreover, the industries subject to contemporaneous cross-section comparisons are often utilities of various kinds and may not have offered much scope for entrepreneurship. Before-and-after studies necessarily observe the effect of an entire package of changes from commercialization to privatization and regulatory reform. They pick up the effects of the increased scope for entrepreneurship that comes with regulatory reform. Unless they are very carefully done, however, before-and-after studies may also incorporate the effects of factor price decreases and

product price increases, which may lead them to overstate the benefits of privatization.

The results of contemporaneous comparisons of private and government enterprises imply that there is not much to be gained by replacing a government enterprise with a regulated private enterprise. The before-and-after evidence qualifies this conclusion by showing that privatization accompanied by the introduction of a less-intrusive form of regulation, such as price caps, has resulted in productivity gains.

The foregoing overstates the precision of before-and-after studies, however. They are often unable to distinguish between productivity gains due to commercialization prior to privatization and privatization itself. Significant productivity improvements are frequently effected even though a firm remains under government ownership. The question remains as to whether these same gains would have been realized had there been no intention ultimately to privatize the firm. Some (Beasley and Littlechild 1992) argue that the prospect of privatization and the managerial incentive system it implies motivates management to push for productivity improvements in the runup to privatization. Others (Quiggin 1995) point to cases in which government enterprises have engaged in massive labor shedding and rationalization even though the prospects for privatization were remote.³⁴ How remote is open to question; it is not clear how frequently governments see business-like government enterprise as an equilibrium state.

Effects on Employees

The effects of commercialization/privatization/regulatory reform on the employees of the enterprises involved have been mixed.

Privatization is generally perceived to be against the interests of the employees of the enterprises involved. Although this perception is not without foundation, neither is it generally correct. For example, all the privatizations studied by Galal and Shirley (1994) and their colleagues are

³⁴ Some systematic evidence comes from Haskel and Szymanski (1993), who find a statistically significant negative employment effect resulting from the adoption of a more commercial orientation by government enterprises in the United Kingdom. All but one of their sample were ultimately privatized.

found to have been beneficial to the employees of the enterprises involved. Other studies (for example, West 1996) report, however, that existing employees suffered wage decreases although employment increased.

Megginson, Nash, and van Randenborgh (1994) find that employment generally increased after privatization. On the other hand, Haskel and Szymanski (1993) find that commercialization resulted in a decrease in employment, although it did not affect wage settlements. What did have a downward impact on wage settlements was deregulation and increased competition in the product market. Although privatization is frequently seen as a means of curbing the power of labor unions, it is neither necessary nor sufficient for that purpose. One of the political services provided by a government enterprise may be to provide agreeable employment at a wage in excess of the employees' opportunity cost. The government may abandon that objective or choose another instrument to achieve it. Doing so need not require privatization, but privatization does signal a change in either the government's objectives or its choice of instruments.

Governments are uniquely equipped to create and sustain market power, which can be exploited by labor unions. Product market deregulation can reduce market power, and there is evidence that this has a negative effect on wage settlements.³⁵ For this reason, some commentators have advocated eliminating Canada Post's statutory monopoly over the carriage of first-class mail (See Corcoran 1997a; 1997b; Coyne 1997). Provided new competitors with nonunion or less militant union employees entered the market on a sufficient scale, elimination of the monopoly privilege would reduce both the public's vulnerability to postal strikes and the ability of the postal unions to extract above-market settlements. Full privatization of Canada Post might facilitate this process (leveling the playing field) or be an outcome (no remaining public policy rationale), although it need not be.

One can easily think of cases in which significant union power co-exists with private ownership and product market competition. The

³⁵ Haskel and Szymanski (1993) find that, other things being equal, a decrease in the market share of a government enterprise reduces the rate of increase in the wages of its employees. They also find that an increase in the commercial orientation of government enterprises does not have a statistically significant effect on the rate of increase in the wages of employees.

North American automobile industry is one. Moreover, labor unions in this industry appear to have been very successful in inducing governments to restrict the amount of competition their employers face from nonunion or less militant union sources, thus enhancing their own market power.

The Terms of Privatization

The terms on which a government enterprise is privatized matter.

Commentators frequently express concern about the price at which the government sells its interest in an enterprise. This price almost always below book value, which implies nothing other than that the government's historic investment in the firm was a poor use of resources.

The price at which a government enterprise is sold may also imply an unusually high discount rate on its future income. The possible reasons are several. First, the market may expect postprivatization opportunism by the government (sovereign risk) possibly in the form of either excessively harsh regulation or a windfall profits tax.³⁶

Second, the discount rate may reflect the existence of a default premium that would not be attached to government debt. This point merely makes explicit what is hidden when the firm is government owned: the costs of failure, admitted or otherwise (think of AECL), by a government enterprise are borne by the taxpayers at large, rather than by lenders. When an enterprise is privatized, that same expected cost of failure is borne by its owners and creditors and is embodied in its cost of capital.

Third, the discount rate may include a premium for bearing non-diversifiable risk. Some argue that government incurs no such cost of risk bearing and that, as a consequence, privatization is inefficient in its

³⁶ There is a certain irony in this. Baldwin (1989) argues that one of the reasons that government enterprise has been so prominent in Canada and other parliamentary democracies is that parliamentary governments cannot bind themselves not to behave opportunistically toward firms that have made long-lived specialized investments to serve a local market. As noted earlier, sovereign risk of a sort continues to exist under government ownership, taking the form of managers' unwillingness to make nonverifiable investments because they know the government may redirect their activities *ex post* so that the benefits of their investment accrue elsewhere.

shifting of nondiversifiable risk from the government, which can bear it costlessly, to market institutions, which must be compensated. One response to this argument concedes that government may have an advantage in risk bearing up to a point but maintains that it is more than offset by the disadvantages of government ownership. If this were not the case, government ownership of everything would be efficient. An obvious analogy here is the contrasting situations of widely held and closely held corporations. Shareholders in a closely held corporation may have a considerable portion of their wealth tied up in their shares; as a consequence, they assume more risk, other things being equal, and require a bigger risk premium. As insiders, however, they are also in a better position to ensure that profits are maximized. As a consequence, the concentration of share ownership in a few hands can have a net positive effect on the value of the enterprise.

An alternate response is that government's only "advantage" in bearing nondiversifiable risk results from its ability to coerce taxpayers into bearing risk without compensation. The argument that it can bear nondiversifiable risk costlessly relies on the assumption that the risk borne by individual taxpayers is infinitesimally small and they do not have to be compensated to bear it. If this risk is not infinitesimally small, it is costly for individual taxpayers to bear it, and this cost should be added to the government's cost of capital.

The issue of the cost of capital to the government is central to the debate over the privatization of Ontario Hydro. Those opposing privatization (Gordon 1997, for example) argue that it would be much more costly than continued government ownership. Some of the costs attributed to private ownership — taxes paid to the federal government, for example — are transfers, rather than resource costs. Although they are relevant to the political debate (indeed, they are the very stuff of it), they do not bear on the efficiency consequences of privatization. The same may be true of some other costs of private ownership identified by Gordon, such as the excess of the private utility borrowing rate over the Ontario Hydro borrowing rate. This difference is presumably the default premium, the cost of which has been borne by Ontario taxpayers at large but under privatization would be borne by electricity users.

A second cost Gordon attributes to privatization is the excess of the cost of the equity capital required by private utilities over Ontario

Hydro's borrowing cost. One role of equity finance is to reduce the agency cost of debt (the tendency of highly levered firms to make investments that pay off handsomely in the event of success but that have a high probability of failure). As a government enterprise, Ontario Hydro can be 100 percent debt financed because the agency cost of debt is, again, borne by the taxpayer at large. The implication is that the cost of equity capital is not an additional cost for privatized firms; it simply makes an existing cost explicit.

Government enterprises may also be sold at a price less than private buyers are willing to pay because the government wishes to discount the shares to encourage widespread share ownership. Although this policy may have good political (and possibly economic) rationales, it reduces the government's income. If revenues and expenditures are to remain in balance, other government expenditures must be lower or taxes higher than they would otherwise be. The result is a transfer from taxpayers to shareholders, some of whom may be foreign, and a dead-weight loss (excess burden) from any additional taxation required to compensate for the government's loss of income. It is important to understand that the sale of a government enterprise below its market value is a public expenditure decision whose merits should be debated like any other.

It is also important to understand the difference between selling below market *ex ante* and *ex post*. Despite its intentions, a government may end up selling for less than it could have obtained. This is a familiar experience, which we all chalk up to experience. The difference is that if government does not like the deal it has made, it has the means of renegeing on it — which takes us back to the problem of sovereign risk.

Public/Private Sector Partnerships

An array of public/private partnerships has been undertaken — or proposed — in Canada in recent years. Some are nothing more than the routine contracting out in which governments at various levels have historically engaged. Others are broader; rather than providing a single service, the contractor performs a vertically related set of functions that provide both the service required by the government and some or all of the requisite intermediate inputs.

The international evidence on the consequences of conventional contracting out is extensive. Some of the most recent evidence is surveyed later in this section. Earlier studies are listed in Viscusi, Vernon, and Harrington (1992, table 14.3). The overwhelming weight of the evidence is that conventional contracting out is beneficial in the sense of reducing the government's cost without reducing service quality. Yet there remain skeptics who maintain that the measured cost savings realized from contracting out do not represent an efficiency gain in that they are partly the result of lower wages and benefits paid by contractors and partly the result of cream skimming (contracting to service only those portions of the market that can be served at low cost). These naysayers further maintain that contracting involves additional monitoring costs stemming from the tendency of for-profit contractors to cut corners.

Public/private partnerships raise additional questions. An intriguing one is whether they have the potential to involve real efficiencies beyond those offered by traditional contracting out or are merely a means of shifting costs from one group of taxpayers to another or from one budgetary category to another to make them less visible to taxpayers and bond-rating agencies. For example, one reason for the privatization of the financing and construction of prisons in the United States is that taxpayers have refused to approve the bond issues required to finance the construction of additional prisons by the government (MacDonald 1996). Some of the examples of public/private partnerships in Canada appear to involve real economic efficiencies, while others reflect a concern with political optics or, more charitably, political efficiency.

Real economic efficiencies may be the result of institutional flexibility increased by, for example, avoiding cumbersome public service staffing and tenure arrangements. Others may come from exploiting economies of scope by, for example, applying technological knowledge and operating experience from other markets and jurisdictions. Privatized UK water utilities are seeking business in Canada and elsewhere; similarly, Canadian local airport authorities (especially Vancouver's) are selling their operating and planning expertise around the world.

Building and operating a facility may also offer economies of scope. Savings in building costs may come at the expense of higher operating costs throughout the life of the facility; a contractor who is responsible for both building and operating a facility internalizes this externality.

That is, provided the contract is properly designed, a build-and-operate contractor has an incentive to minimize the present value of the *sum* of building and lifetime operating costs. This is one reason governments, among them that of Ontario, are now seeking contractors to build and operate prisons. The US experience with the privatization of prisons is that savings come not so much from the private operation of existing facilities as from the design, construction, and operation of new ones (MacDonald 1996).

The political efficiencies of public/private partnerships include giving governments an opportunity to appear to reduce their borrowing requirements and allowing them to distance themselves from the imposition of user charges where they have not traditionally been used (toll roads are an example), particularly user charges that discriminate by season, time of day, or otherwise provide peak-load pricing.

Public/private partnerships also have their own costs. Two types have attracted special attention. The first involves the cost of finance. Public/private partnerships often require the private sector partner (the contractor) to arrange financing. If the government can borrow more cheaply than the contractor, however, this requirement may be inefficient in that it shifts the risk-bearing function onto the party for whom it is more costly. Whether observed differences in borrowing costs do, in fact, reflect differences in the cost of risk bearing is another question, one I discussed at the end of the previous section.

The second cost these partnerships involve is the cost of contracting. Public/private partnerships frequently require the contractor to make long-lived, specialized investments, a condition that makes competitive bidding and recontracting difficult. In awarding such contracts, the government must be a strategic purchaser; that is, it must take into account the effect of its decisions on the prospects for future competitive bidding. Provision for frequent recontracting may enhance competition, but it is inconsistent with the concept of a design-build-and-operate contract. Accepting a lowball bid may result in higher costs in the future if it reduces competition in successive rounds of bidding (MacDonald 1996). Of course, dangers also lie in abandoning the practice of accepting the lowest bid and in trying to protect individual competitors.

Public/private partnerships increasingly involve social services, whose quality is difficult to measure. This difficulty makes it costly to

determine whether the contractor has provided what government actually wants. In the case of prisons, for example, a private operator paid on the basis of occupancy has little incentive to devote resources to rehabilitating prisoners. Success in avoiding recidivism could be rewarded, but further incentive problems could arise if payments ceased when the contractor stopped operating the prison. Contractors may also try to avoid the most difficult cases (cream skimming).

Quite possibly, a public/private partnership may address a problem of political optics but be more costly than conventional procurement. That is, a partnership may move financing off budget or postpone the date at which costs appear in the budget but also increase the present value of the cost of the project to the government, leaving the taxpayer worse off. In other cases, a partnership may be more costly but entail an offsetting efficiency, such as reducing political opposition to the imposition of user charges and peak-load pricing. Depending on the relative magnitudes of the two effects, taxpayers may be better or worse off.

Contracting Out

There is a considerable body of evidence on the economic consequences of contracting out, especially by municipal governments in North America. Below, I examine some of the more recent studies of contracting out by Canadian and US municipal governments and by various levels of government in Australia and New Zealand.

Canadian Experience with Municipal Contracting Out

McDavid and Clemens (1995) summarize evidence about the experience of local governments in British Columbia with contracting out. The authors provide evidence, from 1989 data on the costs of solid waste collection, that contracting municipalities experienced cost savings in the order of 27 percent.³⁷ Two municipalities that used both contractor and municipi-

³⁷ A recent Swedish study isolates one of the cost advantages that solid waste disposal contractors have over municipal governments. Ohlsson (1996) finds that, given fleet size and vehicle characteristics, private contractors paid 10–15 percent less than municipal governments for garbage trucks.

pal collection showed savings from contracting out of between 9 and 12 percent.

McDavid and Clemens's survey of BC municipalities and regional districts reveals extensive contracting out — apparently greater than in the United States. Table 4 summarizes the services contracted out most frequently. The respondents saw the advantages of contracting out in terms of cost savings, staffing flexibility, and access to expertise. Disadvantages cited were lack of contractor competition and control plus union and quality problems in the larger municipalities. Estimates of net cost savings are not reported.

Kitchen (1992) compares the operating costs per revenue vehicle kilometer (RVK) of municipally (department or commission) operated transit systems with those of privately operated municipal systems in Ontario, using data for the 1982–85 period. He finds that, given the number of passengers carried, the units costs of the privately operated systems were lower than those of the municipally operated systems. (There was no difference in the per unit costs of transit commissions and of municipal departments.)

Kitchen attributes the private operators' cost advantage to higher driver productivity, lower driver wages, and more intensive vehicle use. He also finds that, contrary to the common allegation that private contractors skimp on less visible inputs such as maintenance, the number of mechanics per RVK employed by private contractors exceeded the number employed by municipally operated transit systems.

US Experience with Municipal Contracting Out

Dilger, Moffett, and Struyk (1997) summarize the privatization experiences of the 66 largest cities in the United States. As of 1995, the ten most privatized municipal services were vehicle towing (80 percent of the cities), solid waste collection (50 percent), building security (48 percent), street repair (40 percent), ambulance services (36 percent), printing services (35 percent), street lighting and signals (26 percent), drug and alcohol treatment centers (24 percent), employment and training (24 percent), and legal services (24 percent).

The cities surveyed were most satisfied with contracting for private provision of street lighting and signals, solid waste collection, and

Table 4: *Municipal Services Contracted Out in British Columbia, 1989*

	% Provided Exclusively by Contractors
Engineering	
Paved road construction	52
Street light construction	68
Street light design	58
General government	
Legal services	88
Consulting services	79
Auditing	91
Planning	
Architectural services	81
Surveying	59
Community planning	13
Parks and recreation	
Concession operations	31
Fire protection	
Janitorial services	23
Vehicle maintenance	15
Police protection	
Janitorial services	30
Prison meals	26
Animal shelters	48

Source: McDavid and Clemens 1995, 182–183.

printing and least satisfied with that involving drug and alcohol treatment, employment and training, and building security. The primary motive for privatization was cost reduction, and second most important was service improvement. The average annual cost saving experienced by the 66 cities surveyed was between 16 and 20 percent (depending on the service involved). Respondents estimated that privatization improved service delivery by between 24 and 27 percent (again, depending on the service). The realization of lower costs and improved quality included contracts for human services. Notice that this evidence does not support the widespread notion that contracting for human services

is qualitatively different and much more hazardous than contracting for, say, towing or refuse collection.

Critics of privatization argue that most of the cost savings derived from contracting out result from reductions in employee compensation, and almost two-thirds of the cities surveyed indicated that the total compensation package privatized employees received was lower than the package that had gone to the municipal employees they replaced. A second criticism is that for-profit contractors have an incentive to cut corners and therefore require costly monitoring. Although respondents were not asked to estimate their monitoring costs, they did indicate their monitoring techniques, the most important of which were formal inspection and monitoring customer complaints.

Overall, respondents indicated that factors giving rise to successful privatization are (1) setting out thorough but easily understood requests for proposals; (2) ensuring that the low bidder is actually capable of doing the work to the standards stipulated in the contract; and (3) having an effective contractor monitoring and performance evaluation system.

Antipodal Experience with Competitive Tendering and Contracting

As already noted, residents of Australia and New Zealand call contracting out *competitive tendering and contracting* (CTC). Domberger (1994) and Domberger and Hall (1996) summarize the two countries' experience, which is extensive.

In Australia, both Labour and Liberal governments at the federal and state levels have pursued contracting opportunities. In general, any service for which in-house provision is neither competitive nor strategically essential is contracted out. Outsourcing includes conventional contract services, such as building and equipment maintenance, transport services, information technology, legal services, and cleaning. As well, contracts have been let for the operation of prisons, remand centers, hospital hotel services, and water supply facilities and for the collection of some taxes.

New Zealand, Domberger and Hall write,

has extended the application of CTC to services that were previously considered the exclusive domain of the public sector. Whereas activi-

ties such as cleaning of buildings and streets, refuse collection, facilities management and catering have been contracted out for some time, recent additions to the list include planning and policy advice, economic regulations, emergency and essential services. Contracting out is now being considered for services such as fire-fighting, education, prison management, debt and tax collection, quarantine and agricultural inspection services. (1996, 41.)

The evaluations done by the Australian federal and state governments report that the savings from CTC average 20 percent, with 90–95 percent of contracts being rated successful to very successful (ibid., 41–43). Quality rose and, faced with competition from outside contractors, government departments improved their performance as well.

In New Zealand, outside contractors include “local authority trading enterprises,” which have been formed to operate airports, seaports, electricity, gas, and public transport along with privately owned firms. Contracting out is not considered a cost-effective option when its cost advantage is based on lower standards of pay or poorer working conditions.

Public/Private Partnerships in Canada

In a recent study of public/private partnerships in Canada, the IBI Group (1995) describes a number of alternate forms or models of such partnerships. These are

- operate an existing government-owned facility;
- lease and operate an existing government-owned facility, such as an airport or a water filtration plant;
- purchase and operate an existing facility subject to operating specifications of the government;
- purchase, expand, or modify and operate an existing government-owned facility subject to government investment and/or operational specifications;
- lease, expand or modify, and operate an existing government-owned facility subject to government investment and/or operating restrictions;
- turnkey build a facility for government (the standard procurement model);

- build (finance), operate, and ultimately transfer ownership of a facility to government, or build (finance) and transfer ownership but operate a facility for government;³⁸
- build and operate subject to regulatory restrictions on operation;
- build (finance) and transfer facilities such as municipal infrastructure to government generally in return for permission to develop a parcel of land;
- transfer land or other assets to government as a condition of approval of some other activity — a model sometimes called a *coerced partnership*.

One example of a build-and-operate partnership that appears to have yielded real efficiencies is the Hamilton-Wentworth Sewer and Water Treatment partnership. The contract provides for a reduction in municipal water treatment costs (the reason the contractor is able to cut costs is not clear), a fixed payment to the municipality for monitoring costs, and payment of transitional costs by the contractor. For its part, the private sector partner obtained an operating demonstration system for use in its marketing efforts around the world.

A good illustration of the exploitation of economies of scope is the water project of Strathcona County, Alberta; Canadian Utilities Limited, which owns the right of way and provides gas and electrical service, built and operated the water pipeline, realizing economies in both construction and billing. Similarly, by contracting for the operation of its water treatment plant, Sainte-Marie, Quebec, acquired access to the services of highly skilled operating and maintenance personnel of a multiplant operator. The municipality could not have occupied such workers full time.

In other examples of partnerships, political optics are apparent. For example, Honda of Canada built a soccer pitch on its own land for use by Richmond, British Columbia; in return, the municipality reassessed the land and reduced the taxes on it. Thus, the municipality's expenditure on the soccer pitch took the less visible form of a tax expenditure (forgone tax revenue). In another example from Richmond, a developer

³⁸ A recent and important example of a build-operate-and-transfer (BOT) partnership is the one responsible for the Confederation Bridge linking New Brunswick and Prince Edward Island.

built a municipal arena on land he owned. The cost of the arena was recaptured by user fees and the cost of the land by the developer in the form of higher sale prices for residential land he owned in the vicinity. (The municipality could theoretically have recaptured the increase in the value of the surrounding land by means of some form of a land tax levy, but this course might have been politically difficult.)

Highway 407 in Ontario is a much-discussed public/private partnership that appears to be becoming less private every day. It was originally intended as a BOT project, the advantage being that the private operator could charge tolls and use that potential to secure financing, while the government could claim that it was neither adding to the deficit nor responsible for the tolls. Concern about the adequacy of toll income, however, led the potential contractors to demand that the government guarantee the financing, which, in turn, led the government to finance the project itself, using an off-budget financing vehicle known as Ontario Transportation Capital Corporation (OTCC) (Daniels and Trebilcock 1996, 380–381). The highway was designed and built by a private contractor, but its operation remains in OTCC hands and, at the time of writing, tolls had yet to be levied on users.

Glenna Carr (1997), president of the Canadian Council for Public-Private Partnerships, cites other examples in Canada. One proposal is to operate the Technical Standards Division of the Ontario government, which inspects elevators and underground fuel tanks and tests stuffed articles, as a nonprofit public/private partnership financed by inspection fees; it would be overseen by a board of directors comprising industry and consumer representatives.

Carr sees public/private partnerships as being most beneficial in the energy, environment, transportation, recreation, and real estate fields. She sees no role for them in health care, justice, taxation, or policy setting. In this perception, she is somewhat at odds with the partnership movements in Australia, New Zealand, and the United States.

Conclusions

Although much of the evidence on the consequences of conventional contracting out is methodologically quite primitive, a great deal of it exists. The experience to date with conventional contracting out appears

overwhelmingly positive. Although some of the observed cost savings probably come from avoiding union wage premiums, there are also real savings resulting from higher productivity and quality improvements.

Will the more complex public/private partnerships be as successful as conventional contracting out? It is too early to tell. Some of these partnerships are motivated by considerations other than economic efficiency and are likely to improve productivity only by accident. Others are motivated by economic efficiency concerns but are creating new industries and breaking new ground in terms of contracting practices. It will be some time before the extent of their success can be determined, and even then the matter will be contentious.

Nonprofit Organizations

Nonprofit corporations are increasingly viewed as an institutional form with the virtues of government enterprises on one hand and unregulated private enterprises on the other.³⁹ The proponents argue that nonprofit organizations are more efficient than government enterprises and more inclined to take the public interest into account than unregulated private enterprises. The nonprofit organizational form is viewed as an alternative to regulation as a means of protecting the public interest in situations in which competition is not workable. An example of the substitutability between the nonprofit form and regulation (discussed in more detail below) is provided by airport governance. The United Kingdom has chosen to have its major airports operated by a regulated private enterprise, the British Airports Authority. Canada, on the other hand, has opted for unregulated, nonprofit local airport authorities.

Both regulated private enterprises and nonprofit enterprises have advantages of internal efficiency over state-owned enterprises. Moreover, tendencies to exploit market power can be mitigated either by regulation or by elimination of the profit motive. This argument begs two questions: first, why nonprofits should be more efficient than

³⁹ For example, the Advisory Committee on Competition in Ontario's Electricity System (Ontario 1996) recommended that the high-voltage electricity transmission grid presently operated by Ontario Hydro be operated by a nonprofit system operator and that entities buying or selling electricity through the grid conduct their transactions through a nonprofit electricity exchange.

government departments or enterprises; second, why elimination of the profit motive should be more effective than regulation in controlling the exercise of market power.

The essential feature of the nonprofit enterprise is that there is no transferable residual claim. Its management has little or nothing to gain from taking advantage of a monopoly situation to raise prices or of information asymmetries to degrade service quality. For this reason, nonprofits are often chosen to provide trust goods, whose quality is difficult to verify. Although the same result could theoretically be obtained by imposing quality standards on an investor-owned enterprise, the incentive to evade these regulations would remain, and there would be ongoing enforcement costs.

If the management of a nonprofit enterprise has little or no interest in taking advantage of its clients, neither does it have any particular incentive to control costs or to innovate. Given the absence of profits and tradable shares, managerial financial incentives in the form of profit sharing or stock options are not available. Nor do outsiders have a financial incentive to gather information on managerial performance or to expend resources to oust incompetent managers.

Nevertheless, nonprofit organizations may offer means of inducing managerial performance that are not available to state-owned enterprises. There is a bankruptcy constraint (in the current jargon, a firmer budget constraint). The expenditures of nonprofits cannot exceed the income they derive from the services they provide plus donations, and casual empiricism suggests they engage in a continuing struggle to stay within their budgets. (Consider, however, that the budget constraint is probably firmer for a nonprofit organization funded largely by donations than it would be for one that derives its income principally from sales to the government. The government may be as reluctant to force a principal contractor, such as a children's aid society or the Red Cross, into bankruptcy as it is to allow a government enterprise to go bankrupt.

A nonprofit organization is more likely than a government enterprise to have a clear mandate, and responsibility for any failure to fulfill it can be more readily assigned. The day-to-day operations of a nonprofit are less likely to be comingled with the provision of political services (specifying the use of certain technologies, the location of activities, and the ethnic, linguistic, religious, and gender composition

of employees) than is the case with a government enterprise. As a consequence, nonprofits are likely to be more flexible and adaptable. (In this regard, however, nonprofits may be victims of their own success. In the United States, governments purchasing services from these organizations are increasingly requiring that they replicate civil service procedures and employment conditions.⁴⁰

The nonprofit form may also be more responsive in that it allows for the supply of a differentiated set of services. Government and regulated private enterprises may be constrained to supply all comers the same product on the same terms. Competing nonprofits can function as clubs or “mutuals,” offering members differentiated bundles of services at cost. As users of its services, members of a mutual nonprofit organization have at least some incentive to monitor its management. An example of competing mutual nonprofits is the system of UK trust hospitals that contract with local health authorities for the delivery of services (Hirshhorn 1995).

Although the virtues attributed to the nonprofit organizational form have some plausibility for a partially volunteer, partially donation-financed organization and possibly in the context of competing mutual nonprofits, they are less compelling for a professional organization that exists solely to supply services under contract to a government or to the community at large and even less compelling for an organization that has inherited civil service personnel and labor contracts. It is not at all apparent that a bureaucratized nonprofit organization linked to government in a long-term contractual relationship is likely to operate more efficiently than a government enterprise or department. In this regard, some commentators suggest that the rise of the nonprofit organization owes more to political optics than to superior organizational efficiency in that it gives the appearance of a reduction in the size of the civil service. In a US context, Smith and Lipsky (1993) conclude that privatizations involving the transfer to nonprofits of activities formerly carried out by governments have had the ironic effect of facilitating an expansion of government activities by making this growth politically less visible.

⁴⁰ Smith and Lipsky conclude: “As nonprofit service providers are forced to be more business-like, they become more rule-bound and more intent on the bottom line of fiscal health at the expense of responsiveness” (1993, 205).

Airports

Airport governance presents an interesting challenge in organizational design. Although some competition is possible, individual airports are likely to have a considerable degree of market power. The pricing policies of individual airports affect both other airports with which they are linked in an origin-destination relationship and economic activity in the communities they serve.

Until 1992, all major civilian airports in Canada were operated by a federal government department, Transport Canada. Many people regarded its management as overly centralized and unresponsive to local community aspirations. It labored under perverse political incentives that rewarded new construction at uncongested facilities and penalized new expenditures at congested facilities. Beginning in 1992, the government began the process of transferring control of the largest airports to unregulated, nonprofit local authorities.

Before 1987, all major UK airports were operated by a government agency, the British Airports Authority (BAA). In 1987, the BAA was privatized, becoming a regulated private monopoly. Regulation takes the form of a price cap on average revenue per passenger derived from airport charges. The privatized BAA is also subject to restrictions on investment decisions, asset disposals, shareholdings, and takeover bids.

Some commentators (for example, Vickers and Yarrow 1988) see the privatization of BAA as pointless. The vast bulk of its functions were either carried out by private contractors or franchisees prior to privatization or have since continued to be carried out by government employees. The restrictions attached to the privatization limit both the incentive and the ability of management to become more efficient and the terms of privatization have not increased the revenue stream accruing to the government.

Some analysts (for example, Hirshhorn 1995) express similar misgivings about the unregulated, nonprofit local airport authority model adopted by Canada. The incentive of these authorities to exploit their considerable market power is attenuated by their nonprofit status (implying that monopoly rents must be consumed on the job). They are further constrained by a five-year performance assessment requirement and boards of directors nominated by the three levels of government

and possibly by community groups. Moreover, unlike the case with many US airport authorities, air carriers have no role in financing airport operations or investments or on the board of directors. Thus, Canadian airport authorities are deprived of one source of interested, informed oversight, a source whose interests coincide to a degree with those of passengers. It is far from clear that local airport boards of directors as they are constituted have as a priority the protection of the interests of airport users. There is some likelihood that they do not object to — and may even approve of — the collection of rents and the pursuit of objectives other than efficiency by airport management and other employees.

Consider, however, that local airports do compete directly for some kinds of traffic and indirectly in the sense that they can be ranked (benchmarked) by users on the basis of the quality of services they provide. This yardstick competition can be used both as a managerial tool and as a basis for users' demands for better service (the voice option). Pressure may also come from local development interests who also stand to gain from more attractive airport pricing and service quality and variety. Indeed, local airport authorities have apparently moved aggressively in some instances to exploit market niches open to them.

Nav Canada

On October 31, 1996, Nav Canada acquired the Canadian civil air navigation system from the federal government for \$1.5 billion.⁴¹ Nav Canada, a non-share-capital or nonprofit corporation deriving its income from fees levied on users of the system, now has a legislated (and unregulated) monopoly over the supply of civil air navigation services in Canada.

As a non-share-capital corporation, Nav Canada has members rather than shareholders. There are two classes of members: voting and nonvoting. Voting members are the major stakeholders in the civil air navigation system — commercial air carriers, business aircraft operators, Nav Canada employees, and the government of Canada. The

⁴¹ This description of the organization and financing of Nav Canada is drawn from Caloff (1997).

15-member board of directors is composed of representatives of the voting members. Specifically, users appoint five directors, the government three, and the employee unions two. These ten directors then choose four outside directors and a chief executive officer, who is also a director. Users have a plurality but not a majority on the board. In this sense, Nav Canada has some mutual nonprofit characteristics. Users have a greater role to play in managerial oversight than is the case with local airport authorities.

Some commentators view Nav Canada as an institutional model for the provision of natural monopoly essential services, a compromise between privatization and government ownership. As a nonprofit corporation with substantial user representation on its board of directors (“user pay, user say”), Nav Canada, they think, will not exploit its monopoly power and will, therefore, not require regulation. As a consequence, the inefficiencies associated with the regulation of monopoly are avoided.

Nav Canada is 100 percent debt financed. Although this debt is not guaranteed by the government, it has an AA credit rating. The debt instrument employed is similar to the revenue bonds used to finance many public sector projects in the United States. Some people (for example, McCallum 1997) claim that achieving this high credit rating without the use of “expensive” equity capital is an important achievement and has resulted in a substantial cost saving.

This claim is an interesting one, and it worthy of further consideration. Nav Canada is, in fact, less highly levered than it appears. It has a legislated and unregulated monopoly of an essential service with no close substitutes. As well, it has the right to seize aircraft in order to collect delinquent user charges. Thus, it has access to a stream of potential monopoly profits, some or all of which can be used to cover payments to the bondholders. There is an implicit equity cushion in the form of unrealized monopoly profits.⁴² The denominator of the true leverage ratio is the present value of the unrealized potential profit stream. The effective equity holders in Nav Canada are the users of its services — those who pay the user charges. It is users who are bearing

⁴² Nav Canada is also required to maintain retained earnings at the level of one year’s debt service plus three months’ operating and maintenance costs.

the financial risk in the form of their liability for an uncertain stream of user charges, the stream being whatever is necessary to cover costs plus payments to the bondholders.

An alternative would be an uncertain stream of payments to equity holders equal to the difference between user charges and the sum of costs plus payments to the bond holders. Whether the assumption of the risk-bearing function by the users of the civil air navigation system, rather than by equity holders, is efficient is an open question. What is important to understand is that while payments for risk bearing are not explicit when the risk is borne by users (as they would be if risk were borne by equity holders), neither risk nor the cost of bearing it is avoided. Indeed, it may be possible to redistribute risk so as to reduce the cost of bearing it.

The other virtue claimed for Nav Canada is that it will operate efficiently on a breakeven basis in a monopoly environment, obviating the need for regulation. The assumption is that the presence on the board of directors of five user representatives is sufficient to ensure that the service provided is efficient and of suitable quality. Whether the oversight of a portion of the directors is likely to achieve these ends is debatable. In order to exercise an oversight or monitoring function, directors must overcome information asymmetries. Representatives of air carriers may indeed be well placed to make judgments regarding the quality of the service being provided and perhaps to compare charges with other jurisdictions, but they are less likely to be able to determine whether various functions are overstaffed or overcapitalized. Moreover, in order to be effective, the user directors will have to be of like mind about the quality of service to be provided. Since users vary in their characteristics, each individual representative will have an incentive to seek changes in the nature of the service that are particularly advantageous to his or her principal but will be paid for by all users.

Before the formation of Nav Canada, there was apparently considerable debate within the government regarding the alternate organizational forms that might be adopted. Users are said to have favored a private nonprofit corporation (Caloff 1997), a model already adopted in Australia and New Zealand (Stanbury 1994, 16), while Transport Canada and the Treasury Board favored a Crown corporation.

As well, the debate included the question of a greater role for competition in ensuring efficiency, innovation, and responsiveness. I cannot imagine, however, how contemporaneous facilities-based price competition could operate within a geographic area.⁴³ It is not apparent how aircraft flying in the same area could operate under the control of different navigation systems. The probable duplication of facilities and personnel is also obvious.

Contractors could, however, compete for the right to operate a monopoly system for a period of time — say, five to ten years. The facilities could remain in government hands, but the appropriate organizational form would still have to be found. The benefits of coordination of facilities design and operation would also be lost. If the contractor provides facilities, problems could arise in transferring them if the incumbent lost in a subsequent round of bidding. Potential contractors might require a considerable premium to invest in specialized, long-lived facilities. Indeed, they would probably have to be subsidized even to submit a bid.⁴⁴

Whether Nav Canada had to be a national monopoly, as opposed to a set of regional monopolies, is another question. Regional companies could at least have provided some form of domestic efficiency benchmark for each other. To the extent that each had a secure regional monopoly franchise, however, none would have an incentive to engage in innovative rivalry. Moreover, regional companies would almost certainly have had different income bases and thus been obliged to charge different rates, a situation that would have run counter to the government's political objective of standardizing user fees throughout the country and eliminated its ability to engage in off-budget interregional cross-subsidization.

Proponents of Nav Canada are probably correct in arguing that the role for competition in efficiency and innovation in the supply of air navigation services is limited. Given that limited scope for competitive

⁴³ It is conceivable that there could be scope for competition along the market boundaries between air navigation systems operating in different but contiguous geographic areas.

⁴⁴ These issues are also addressed in the earlier literature on franchise bidding for CATV monopolies (Williamson 1976), as well as in my discussion above on public/private partnerships.

discipline, some form of nonprofit organization provides at least some protection from the exploitation of monopoly power. But of the many possibilities, a private nonprofit corporation was only one. The government department option had already been seriously discredited; other possibilities were a Crown corporation and a user cooperative.

The apparent failings of continued Transport Canada operation stemmed from the government's austerity program. Government wage and staffing ceilings and procurement postponements limited the ability of the air navigation system to maintain service and improve quality at a time when increasing demands were being placed on it. The implication is that, although investments in the system would have passed a cost-benefit test and would thus have been a productive use of resources, other uses of funds had a higher political priority (and possibly some had a higher economic rate of return).

The problem with the departmental mode of operation seems to have been the result of the inability of the political system to distinguish between economically worthwhile investments and pork barreling. The response of each government department to a proposed budget cut is that its activities and projects are absolutely essential. Unable to distinguish among self-interested departmental assessments of the value of their activities, the government cuts departmental budgets across the board. The departmental organizational form was crippled in the sense that it was politically and bureaucratically incapable of making investments in the air navigation system for which its users would have been willing to pay.

A Crown corporation would have solved the problem of political optics by taking air navigation employees out of the public service and by making investments in the system into off-budget items. It would still have been necessary, however, to design a means of making a monopoly Crown corporation efficient and responsive to the users of its services. One possibility would have been to retain the profit motive but to add a layer of regulation on top of it. This approach has been widely used in Canada in the past but appears to be going out of favor. Another possibility would have been to stipulate service objectives and a self-financing requirement in the enabling legislation.

Another option would have been a user co-op to supply air navigation services at cost to air carriers and other aircraft operators. One

problem with a co-op might have been devising a member voting scheme that would harmonize the potentially conflicting interests of the various user groups.

Conclusions

The nonprofit organizational form is potentially a substitute for government departments, government enterprises, and regulated private enterprises. Yet relatively little in theory or in our experience with nonprofits indicates the circumstances, if any, under which they are the preferred instrument. Current enthusiasm for nonprofits is more reflective of disappointment with government departments and enterprises and with regulation than with past success. Although the nonprofit organizational form is not without virtues as a means of providing trust and club goods, its adequacy in a large-scale commercial context remains to be tested.

Final Thoughts

The formation of public policy can be viewed from a number of perspectives. Some see it largely as the outcome of tradeoffs between contending interest groups; policy changes reflect nothing more than the ascendancy of one interest group over another. To others, including the C.D. Howe Institute, ideas matter. A good idea, well explained, can overcome the power of even an entrenched interest group.

If ideas do matter, there is certainly merit in bringing the evidence on the economic benefits of privatization to public attention. Privatization is about more, much more, than selling off the bus company. It is about institutional design, and in some countries (New Zealand, for example) it has involved considerable reflection on just what should be expected of government.

What we have come to call privatization is part of a larger process of institutional change involving commercialization, contracting out, and regulatory reform as well as the sale of state-owned enterprises to the private sector. The literature on this process is vast but of uneven quality.

The evidence on conventional contracting out, especially by municipal governments, is unambiguously positive: it reduces the cost of providing the services involved. There is more skepticism and less evidence on the consequences of contracting for social services and for the joint supply of infrastructure and services (public/private partnerships). These instruments are likely to present serious — but not necessarily insoluble — contract design problems. They may require the government to be an active and strategic purchaser in ways not envisaged by privatization zealots. Nevertheless, the potential economies, especially in the accumulation and use of knowledge, make continued experimentation worthwhile.

With respect to the entire process of commercialization, regulatory reform, and the sale of state-owned enterprises to the private sector, the weight of the evidence to date is that it has been beneficial. The precise contribution of the change in ownership to the gains that have resulted from the process as a whole is difficult to identify. One can argue, however, that privatization is an essential part of the process in that it provides the impetus for commercialization and makes regulatory reform, especially regulatory forbearance, possible.

Whether or not privatization is a *necessary* part of the process, once commercial objectives have been adopted and regulatory reform has allowed competition or potential competition to exert its disciplining force, there is little, if anything, to be gained from continued state ownership — provided that the government sells its interest at a price equal to the present value of the income it might expect to derive from continued ownership.

Although the international experience with process of commercialization, regulatory reform, and privatization has been favorable and there are good conceptual arguments for privatization itself, the case for individual privatizations must still be made on the merits. The body of existing evidence is not so strong or so detailed that it can be taken to imply that, say, the province of Saskatchewan would *necessarily* realize significant economic benefits from privatizing its electric power or telecommunications utilities.

The theoretical and empirical literature on privatization reminds us to remain open to the potential benefits of employing decentralized market or market-style incentives in place of hierarchy and command

and control. The ongoing international experimentation in institutional design has been worthwhile and is clearly worth pursuing further.

The literature also teaches that privatization is frequently not about pushing a button and getting less government. Unless the political forces that brought about government intervention disappear (and they may in some cases), privatization will be about getting different government, rather than less government. It may involve catering to a different set of interest groups or catering to the same interest groups in a different way. It may involve the same or similar political activity in different forums. It is often not simply a matter of opting for the invisible hand.

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