Government Enterprise:

Roles and Rationale

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GOVERNMENT ENTERPRISE: ROLES AND RATIONALES

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INTRODUCTION

by

Ronald Hirshhorn

The papers in this volume were initially presented at a colloquium held in Ottawa in September 1984. The Economic Council had embarked on a major examination of government enterprise in that year and the colloquium was organized as a part of a broad research program which will continue through 1985. The purpose of the colloquium was essentially exploratory; the intention was to bring together, at an early stage in the Council's project, individuals from different backgrounds and with different perspectives to reflect upon the raison d'être of these entities which operate in the twilight region bridging the public and private sectors.

While the precise boundary lines of public enterprise are open to discussion, there is little disagreement about its economic importance. For the colloquium, as for the Council project as a whole, interest has centred on organizations with a particular set of characteristics: the relevant actors are owned or controlled by a government, have seperate legal status along with a reasonable degree of operating autonomy, and are all engaged to a significant extent in what might broadly be considered as commercial activities. This would include such major federal corporations as CN, Air Canada, AECL, and Petro-Canada; the large, provincially owned, electric utilities, as well as the significant number of

provincial corporations in the resource sector; and municipal commissions responsible for gas, water, electricity, and urban transit. A forthcoming study for the Council indicates that the relevant universe consists of some 1,300 enterprises, including both parents and subsidiaries.[1] In 1981 government enterprises accounted for about 15 per cent of total corporate assets in the economy, with that share rising to over 20 per cent, when financial institutions are excluded.

The general subject of the roles of, and rationales for, government enterprise lends itself to a number of different approaches. One might investigate the historical circumstances that led to government intervention and the pressures that accounted for the use of government enterprise as distinct from alternative instruments of public policy. Instead of examining situations in which government has intervened, one might look more speculatively at the potential for government enterprise to contribute to the pursuit of significant public policy objectives. Or, one might attempt to shed light on the activities undertaken by public firms subject to various social and political pressures and prevailing legal and administrative arrangements. Each approach while incomplete in itself, can contribute an important dimension to our understanding of government enterprise as an instrument of public policy.

Explaining Government Intervention

All three approaches are represented by the papers in this volume. The papers by Reuven Brenner, John Baldwin, and Abraham Rotstein examine, from quite different angles, the circumstances underlying the creation of government enterprises.

Brenner's paper is a broad attempt to identify the commonalities over time and across geographic boundaries, in the origins of state-owned enterprise. The search for common origins leads ultimately to a model of human behaviour in which individuals are motivated to support new policies and institutions when confronted with a loss in their relative standing in society. This approach can be distinguished from a recent body of literature which attempts to understand the use of government enterprise in the context of the choices faced by vote-maximizing politicians; Brenner's objective is essentially to look beneath the political calculus so as to identify the problems that have been at the root of the pressures for government intervention.

The thesis that government enterprise has been a response to the shocks and crises that, at times, beset various groups in the economy fits comfortably with the facts on the history of the Canadian Wheat Board. Rotstein's paper highlights the important role of a number of critical events (two world wars and a depression) in the origins of the Wheat Board. The market system was

not abandoned lightly, but it ultimately proved inadequate in the face of the extraordinary pressures to which the wheat market was subjected. In Rotstein's view, there is a need to recognize the limits of markets; excessive price fluctuations can disrupt orderly allocation and lead to outcomes that are not socially tolerable.

While historical accounts can provide us with an important understanding of the events leading to government intervention, they are often unable to explain why a particular mode of intervention has been selected. This problem is confronted directly in Baldwin's paper, which seeks to explain why, in situations of natural monopoly, Canada has frequently resorted to public enterprise, whereas the United States has opted for regulation. For an answer, Baldwin turns to the transactions-cost literature which provides important insights into institutional arrangements within the private sector. This research emphasizes the substantial exchange risks that accompany contractual arrangements involving durable, specialized assets. Where two parties are tied to one another because of a highly specialized investment, each may be vulnerable to opportunism. Regulation can be an effective mechanism for reducing the risks of opportunistic behaviour and minimizing contractual costs, but this will be the case only where the state itself is bound by legal or constitutional constraints to abide by fairly written contracts. Baldwin finds the absence of such constraints in the critical years when Canadian

governments were searching for an optimal arrangement for managing natural monopolies was an important factor underlying the emergence of government enterprise in this country.

Exploring New Directions

The possible role of government corporations in supplementing or supplanting traditional approaches to the implementation of government policy is examined in the papers by Kevin La Roche and Kernaghan Webb, and by Roger Ware. The La Roche/Webb paper emerges out of ongoing research at the Law Reform Commission into the availability of alternatives to the traditional instruments of policy implementation which rely heavily on legal sanctions. Government corporations are of interest in this context because of their potential to influence the conduct of private firms through their market activities. Government enterprise may be an attractive alternative to regulation where it is difficult to specify, with appropriate legal precision, the conduct required by private firms, or where enforcement of a regulation is exceedingly costly. As the paper indicates, however, an extension in the role of government corporations raises its own concerns, not the least of which relates to the problem of how to control the policy implementation activities of these quasi-autonomous public entities.

The paper by Roger Ware further develops the concept of the government corporation as "regulator." Ware's paper is in the

tradition of previous theoretical studies that have shown how a public firm dedicated to maximizing social welfare can discipline the market power of private firms in oligopolistic markets through its own decisions with respect to price and quantity. Ware's focus is on market equilibria when entry conditions are affected by the presence of a welfare-maximizing public firm. However, whereas the previous literature emphasized the capacity of a public firm to reduce (and, in the extreme, to eliminate) the distortions due to imperfect competition, Ware's model is less reassuring of an efficient outcome. The paper looks, in particular, at industries that have undergone important changes in production technology so that they can no longer be considered a natural monopoly. A public firm in such industries may be unable to induce the entry required to bring about an efficient market structure; the industry will remain a monopoly, albeit an "unnatural monopoly." In such situations, as Ware indicates, it is nonetheless questionable that privatization would lead to a superior outcome.

Probing Public Enterprise Behaviour

The large and complex problem of understanding public enterprise behaviour and the forces underlying that behaviour was the general focus for a number of the presentations - by Weaver, Wintrobe, Latouche, Cairns, Brazeau and Schutz.

A common starting point for much of the literature on government enterprise behaviour is the recognition that the objectives of managers may be quite distinct from those of the owners and the elected politicians who represent the owners. Kent Weaver and Ronald Wintrobe address the issues that arise from this possible divergence in interests, but from quite different vantage points. Weaver's concern is with the strategies enterprise managers pursue to achieve certain common goals - "security," "autonomy," and "public service" goals. He finds that an examination of the structure of markets in which public corporations function and of the constraints imposed by governments can yield important insights into enterprise behaviour. Where financial and command structure constraints are weak, for example, a firm is more likely to follow an autonomy strategy; one might expect it to pursue various market initiatives designed to increase its profitability and reduce its reliance on public funds. Weaver's paper suggests that general models that do not allow for the differing constraints to which public firms are subject, are likely to be severely limited in their ability to explain government enterprise behaviour.

It is not necessarily the case that the public enterprise manager who is pursuing his own particular objectives is acting contrary to the interests of the firm's owners and their representatives. Indeed, the strategic behaviour of an enterprise may be a response to incentives established by government ministers

and their officials. In a more general context, the central question is whether effective mechanisms exist to police the management of public corporations and ensure that their activities coincide with the interests of the corporation's principals. In answering this question, Ronald Wintrobe disputes the widely accepted view that mechanisms to enforce managerial behaviour are weaker in the public than in the private sector. His paper attempts to show how many of the control mechanisms in the private sector have an analogue in the public sector. The evidence purporting to establish that public corporations are less efficient than private corporations is, in Wintrobe's view, the product of misleading comparisons; important but subtle differences arise from the fact that government firms serve political markets more, and economic markets less, than private firms.

In his paper, Daniel Latouche attempts to shift the focus from the examination of particular structures and mechanisms to a consideration of the broader socialization process within organizations and of the attitudes, values and beliefs that provide a public corporation with an identity and a purpose. The "culture" of an organization may, or may not, be consonant with the broader public interest. Before an assessment can be made, some appreciation of the forces shaping the organizational culture is required. In his exploratory study of Quebec enterprises, Latouche found that, with one rather notable exception (Quebec Hydro), organizational memory was surprisingly shallow. In the place of an

organizational culture, however, be found a strong sociopolitical culture. What Latouche refers to as "the tales and myths of the Quiet Revolution" have coloured both enterprise managers' view of their own responsibilities and the attitude of successive Quebec governments to the provincially owned corporations.

Whereas Latouche is concerned with the forces within a particular province, Robert Cairns' objective is to identify influences on the activities of a particular group of public corporations -- namely, those in exhaustible-resource industries. The goal of rent collection features prominently in discussions of state-owned resource corporations. When a public corporation is established through the acquisition of a private firm, however, there is a danger that future rents will be forefeited, or that sizeable initial losses will be incurred. Cairns finds, in fact, that to understand the activities of state-owned resource corporations one must look well beyond the objective of rent collection; government ownership has been part of a thrust towards public control of all aspects of an industry that is perceived as a key sector of the economy.

Recognizing the diverse influences on public corporations and the possibilities for behaviour at odds with the public interest, what type of legal constraints are appropriate? The final paper by Jean Brazeau and Cathy Schutz, addresses one particular aspect of this question arising from the immunity of agent Crown

corporations from prosecution under the Combines Investigation Act. While government corporations can in theory improve performance in oligopolistic markets, in practice profit-oriented public enterprise managers may face strong incentives to engage in collusive behaviour. Brazeau and Schutz argue that the existing exemption -- which could be extended de facto to private corporations engaging in anticompetitive practices with agent Crown corporations -- serves no useful purpose and is contrary to the public interest.

The Task Ahead

In a recent study, the investigation of public corporations is aptly situated within the context of a broader search "for answers as to how the forces of politics, the realities of economics, and the exigencies of effective management can be combined to improve the conduct of the public's business."[2] As is the case for the larger inquiry, the search for an understanding of public corporations requires us to explore a broad terrain undeterred by disciplinary boundary lines. The colloquium amply reflected both the size and scope of this endeavour.

The papers in this volume provide a number of useful insights, but in the course of opening new avenues for investigation they also demonstrate the undeveloped state of our current knowledge. Conclusions about the appropriate role of government enterprise

must await further analysis of a number important issues. Notwithstanding the significant research that is available, we have much to learn about the decision-making process in government corporations. Further research is needed into the impact of specific legal and administrative controls on the incentive structure of public corporations. The role of government enterprise must be examined with a full awareness of the fact that it is not just a passive instrument of government policy but also an important component of the political process. The implications of government ownership in the context of the critical issues facing particular sectors of the economy require consideration. And since the merits of government enterprise depend in most instances on the other means that are available to pursue particular objectives, some attention must be given to the efficiency and effectiveness of alternative policy instruments. These are some of the issues that will preoccupy the Council in its ongoing inquiry into public corporations.

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1. Of the total number of government enterprises, 327 are federal, 455 are provincial, and 521 are local. Jacques Carrière, "L'importance des entreprises publiques au Canada," Economic Council of Canada Discussion Paper (forthcoming).

2. Ann-Marie Hauck Walsh, The Public Business: The Politics and Practices of Government Corporations, A Twentieth Century Fund Study (Cambridge, Mass.: The MIT Press, 1978), p. 13.

STATE-OWNED ENTERPRISES -- PRACTICES AND VIEWPOINTS

by

Professor Reuven Brenner
University of Montreal

RÉSUMÉ

Il est assez facile de critiquer, mais beaucoup plus difficile de proposer une autre façon d'expliquer certaines réalités. J'espère, cependant, que les lecteurs auront la patience de se familiariser d'abord avec certaines façons traditionnelles d'aborder la question des entreprises d'État et sur les critiques qu'elles soulèvent. Ils pourront mieux comprendre ensuite la démarche adoptée dans la présente étude. Mais je dois admettre au départ que les faits présentés ici n'appuient pas entièrement mon argumentation et que j'ai dû faire appel à un certain nombre de documents portant sur une grande variété de sujets et publiés ailleurs.

Beaucoup d'études portent sur les entreprises d'État, mais peu, sinon aucune, présentent un caractère empirique. Que peuvent-elles nous apporter ? Peu de chose en réalité. Certaines opinions sont sûrement fort intéressantes, mais si elles ne s'appuient pas sur les faits, le lecteur se perd rapidement dans un vocabulaire technique prétentieux.

Avant de passer en revue certaines des approches traditionnelles pour ce sujet, l'étude présente une analyse factuelle des sociétés publiques dans divers pays et dans le temps. Ainsi peut-on mettre en doute un certain nombre de démarches déjà proposées pour examiner ces entreprises, et limiter le nombre de points de départ et de contextes possibles.

L'étude traite ensuite du rôle de l'État en général et, en particulier, de son intervention par le biais des entreprises publiques. Elle examine enfin divers faits supplémentaires et présente des conclusions mettant l'accent sur les répercussions qui s'en dégagent au plan des politiques.

ABSTRACT

To criticize is relatively easy. To provide an alternative approach toward explaining some facts is much more difficult. Still, I hope that the readers will have the patience to become first acquainted with some of the traditional approaches toward the subject of state-owned enterprises and criticism on them. For, only then can one understand the alternative viewpoint presented in this study. Although, I must immediately admit that the facts presented here cannot carry the weight of my arguments, which draw support from a number of studies dealing with a wide variety of subjects published elsewhere.

There have been numerous studies written on state-owned enterprises, many of them with little, if any, appeal to the facts. What can one learn from such studies? Not much: while some ideas may turn out to be just fine, in the absence of reliance on facts, one is quickly lost in, oy, that bombastic, technical vocabulary.

Before surveying some of the traditional approaches, some facts about state-owned enterprises across countries and time will be presented. This evidence will serve to cast doubt on a number of approaches that have been proposed to deal with the subject of state-owned enterprises and thus narrow down the possible departure points and the contexts in which the subject may be illuminated. Next, an approach is presented which deals with the

role of the state in general, intervention in the form of state-owned enterprise in particular. Finally, additional evidence is discussed in the light of this approach and a concluding section, emphasizing the policy implications, follows.

I INTRODUCTION

To criticize is relatively easy. To provide an alternative approach toward explaining some facts is much more difficult. Still, I hope that the readers will have the patience to become first acquainted with some of the traditional approaches toward the subject of state-owned enterprises and criticism on them. For, only then can one understand the alternative viewpoint presented in this study. Although, I must immediately admit that the facts presented here cannot carry the weight of my arguments, which draw support from a number of studies dealing with a wide variety of subjects published elsewhere.[1]

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departure points and the contexts in which the subject may be illuminated.

State-Owned Enterprises - In What Context?

From ancient times, some enterprises have been owned and managed by pharaohs, kings and their entourage -- the one dealing with Ancient Egypt's stock of grain jumps immediately to one's mind.[3] Much later Adam Smith, perceived today as an unqualified advocate of "free markets," clearly authorized publicly owned and operated enterprises (canals, post office, bridges and highways) and intervention for the shipping industry for the requirement of defense.

Variations on these themes can be found in numerous articles written since then justifying public ownership.[4] But what facts should we look at, during this century in particular, if we want to get additional insights into this problem? Should one draw conclusions by looking only at the Western countries and so-called "capitalist" regimes? Or should one also take note of the quite clear-cut evidence from the Communist block and the developing countries? If one considers such a global, historical outlook, it becomes obvious that the subject of state-owned enterprises cannot be separated from a discussion either of the role of the state, or of ideology. Indeed, the evidence and discussion presented next

suggest that narrow approaches, which have avoided touching these central issues, have shed little, if any, light on the subject.

Let's start with a brief discussion of some economic, a-historical arguments that have been put forward to justify why some enterprises are state rather than privately owned. The arguments can be broadly put into these two categories:

a) existence of economies of scale
b) externalities.

There have been numerous other arguments put forward by economists for justifying state intervention -- on sovereignty, regional development, nationalism, wealth distribution. The reason for discussing them apart is that traditional approaches in economics have nothing to say on these subjects.[5] Thus, economists' opinions on these topics should not be interpreted as implying that they have a theoretical apparatus supporting them, and should be given no greater weight than the opinions of laymen.

Other studies have taken a different direction: they concentrated not on the question of state versus private ownership but state ownership versus other form of state intervention. This topic too belongs to a different sphere: it already implicitly recognizes the role of the state and it can thus concentrate only

on the question of various instruments that may be chosen to implement its goals. But, of course, it cannot illuminate the question of why is state intervention needed to start with.

Economies of Scale and Externalities - Where are the Theories and the Facts?

It has been frequently argued that economies of scale that manifest themselves in the so-called "natural monopolies" can justify public ownership. This argument has been frequently put forward for utilities, communication and transportation. But is the argument accurate? First, Demsetz (1968) found a flaw in it even on logical grounds. He asked: if indeed average costs fall so that the lowest dictates but one firm, why should that firm be publicly owned? In principle, the state can call for competitive bidding and grant the ownership and management of the firm to the lowest bidder. Thus, it is not enough to state that there might be economies of scale, one must explain, within this view of the world, why doesn't such bidding arrangements emerge?

The reason for the lack of emergence of such a process may be either that it is costly[6] (a viewpoint that cannot be tested), or that, in fact, the whole approach may be discarded, i.e., that the downward average cost argument, while theoretically appealing to some economists may not be in fact the problem, and the emergence or lack of emergence of state ownership may be linked with an entirely different reasoning.

Aristotle, in his Politics wrote that "He who considers things in their first growth and origin, whether the state or anything else, will obtain the clearest view of them." Indeed, as it will be repeatedly shown in this study, the emergence of state-owned enterprises have rarely been associated with economies of scale, (i.e., with the perception that one big enterprise can provide more cheaply a good than several smaller ones) but with completely different perceptions.

In his 1976 article on public ownership, Pryor wrote that economies of scale "may be common in certain utilities (water, sewage, electricity, gas), in communication (postal and telephone), and in transportation (possibly railroads)" (p. 9). Yet later in the study he makes these observations: "It can be quite plausibly argued that the "natural monopoly" argument does not really fit electricity production and other arguments must be employed to examine this case" (p. 10). Indeed, at least in Canada, part of the reliance on Crown corporations in electricity can be understood in terms of a number of features, none linked to the perception of economies of scale. The decision to nationalize the electric utilities in British Columbia and Quebec resulted from the goal of avoiding paying taxes to the federal government. Since a provincial Crown corporation is immune from federal income tax, the provincial governments recognized that they would be able to lower costs by public ownership. Although, it should be emphasized that such a step implies that the revenues of the

federal government diminish and it will redistribute less. Thus the obvious question that arises is: would the B.C. and Quebec government nationalize if their public's perception was that they were receiving their money's worth from the federal government? The answer is -- doubtful. In other words, the nationalization cannot be simply explained by a peculiar feature of the legal system (as Trebilcock and Prichard (1983) seem to argue), but it may be linked with a disagreement on the way wealth is redistributed among the provinces by the federal government. The desire to change the distribution of wealth, not only on the federal, but also on the local level, played a role too in Quebec's nationalization. The desire was to deliver senior jobs in the industry to French-speaking rather than English-speaking Quebeckers -- a step that would be hard to carry out by an explicit legal order (since Quebec, as the rest of the Western World, is -- at least in words, if not in facts -- committed to an ideological straightjacket under which such an explicit regulation would be difficult to swallow). Trebilcock and Prichard (1983) also note that in Saskatchewan, the change from private to public was due to the perceptions that the private electric utility industry was cartelized and the anti-combine legislation ineffective (more on the Canadian experience with electricity appears in the next section).

In the U.S. too, evidence that the idea of economies of scale can justify public ownership for electric utilities is hard to

find. The debate seemed to be ideological. In the late twenties, President Herbert Hoover, vetoing a public power bill, proclaimed: "I hesitate to contemplate the future of our institutions, of our government, and of our country if the preoccupation of its officials is to be no longer the promotion of justice and equal opportunity but is to be devoted to barter in the markets. That is not liberalism; it is degeneration." Walsh (1978) also notes that:

> "President Dwight D. Eisenhower echoed Hoover's opinion when he branded the Tennessee Valley Authority as creeping socialism. Again twenty years later, the Central Maine Power Company led a publicity campaign to defeat a proposal to establish a state power authority in Maine by stressing that free enterprise was the American way. The company's chief executive described the proposed authority as the most radical plan ever advanced in these United States. But, in fact, throughout the United States, 299 private power companies, 1898 municipally-owned electric utilities, 112 state and country power corporations and utility districts, 923 rural electric co-operatives, and 10 federal agencies were in the power business. (The 299 private companies, however, enjoyed 80 per cent of the retail sales). Despite a widespread dissatisfaction with electric service and despite prices that were among the highest in the nation, the voters of Maine <u>defeated</u> the public power proposal" (pp. 14-15, italics added).

Further, Pryor (1976) notes that:

> "Some industries involve economic power sufficiently great to compromise the independence of the political system. One prime example is weapons production... Another (and perhaps better) example is the postal system which is nationalized in every country in the world [this statement was written

> only eight years ago!]. The type of power base it provides is shown in certain ancient despotic societies where the Postmaster General was also the head of the internal security apparatus. Similarly, defence is a vital aspect of political sovereignty; therefore most governmental leaders are loath to permit private armies in their territories or to allow the private accumulation of mortars, torpedos, and other instruments of war. Since rapid transportation of troops is often a vital necessity, certain transportation industries might also be nationalized. The energy and fuel industries might be viewed similarly" (p. 9).

Today the argument about postal services seems, in a sense, outdated: after all Federal Express, Purolator and numerous other companies compete with postal services, the only thing keeping them out from providing additional ones being government regulation. On the other hand, one must admit that while in the West postal services are no longer associated with the issue of security (but in case of wars), in the Communist block they clearly are and letters are censored. But other channels of communication are still associated even in the West with sovereignty and political power -- this was the justification given for state ownership of the TV channels and radio stations in France, where, by the way, telephone conversations are tapped (consider the "Canard Enchaîné" episode not so long ago).

Pryor's discussion and evidence thus raises some uncomfortable thoughts: first, where is the evidence for economies of scale? The regularity he captures when looking at the prevalence of state ownership in the West and in Communist countries, observing a

higher percentage in utilities, transportation, communication, services (defense and public administration) -- although with enormous variations around the trend -- may as well be attributed to the perception that the same sectors are perceived to be linked everywhere to security, sovereignty and political power, a perception which is not so surprising. Moreover, this argument would even shed light on some of the variations around the trend (that an "economies of scale" argument cannot): the smaller extent of state ownership in the U.S. relatively to the West European countries being linked with the fact that in historical memory loss of sovereignty was more frequently a palpable threat there than in the U.S.. Second, which sector in the economy cannot be associated in one way or another with the question of security? Even agriculture fits the bill in more then one way: embargos on grain exports have been used as political weapon. Should one then conclude that practically every sector is a candidate for state ownership? Third, economists' and statisticians' comparisons based on categories of industries across countries and time must be viewed skepticism: while the words used are the same -- "postal," "telephone" services -- the perception of their services differ significantly. Fourth, the discussion draws attention to the fact that one must distinguish between reasons that can justify the emergence of a state-owned enterprise and those that are given to justify its persistence. For, only by looking at the circumstances that have led to its emergence can one check the accuracy of the economies of scale argument.[7]

Let's illustrate this third point with the example of the railroads, a sector where state ownership or intervention is frequently attributed to the existence of economies of scale. Was it really this view that led to state ownership some times, to regulations other times? Again, the facts suggest a negative answer. As Stevenson (1981) summarizes:

> "State ownership of railways has had a long and complex history in Canada and elsewhere. To some degree, the railway might be considered to have the characteristics of a natural monopoly... Yet in practice it usually was not, particularly in the United States and the United Kingdom... As late as 1933, it was estimated that only 38 per cent of the world's railway mileage was under state ownership. Private ownership predominated in North America, South America, and Africa, while state ownership predominated in Europe, Asia, and the South Pacific" (p. 320).

According to Middletown (1937) "the main reason for Bismarck's [nationalization of railways] was of course political, with a frank realization of the importance of the railways in a military sense" (p. 131), while in Italy "soon after 1870 the new government began to buy up the railway lines in the North where there was thought to be danger of Austrian interference with the new regime" (p. 204). "The government decided to build the main trunk lines because it was feared that if foreign capital was permitted to enter the field it would constitute a threat to the nation's independence" (pp. 204-5). The same arguments were put forward in Japan (war with Russia and the fear of foreign influence). In France, the government purchased the country's

private railroad companies in 1930 to rescue them from what was perceived to be an unprofitable field and organize a national network -- more about the social and political context within which this step was taken will be said later. In Canada, as Stevenson (1981) notes, state ownership at the federal level

> "began with Confederation, by which the new federal state assumed both the assets and liabilities that had arisen from the railway-building efforts of New Brunswick and Nova Scotia. The British North American Act also required the federal government to build the Intercolonial Railway connecting those two provinces with Central Canada" (p. 320).

Later, for a variety of reasons, Canada found itself with "three transcontinental railways, just as the war dried up the supply of immigrant farmers and British portfolio investment on which at least two of them depended. The response of Sir Robert Borden's government to this unhappy situation led in a series of steps towards Canadian National Railways" (p. 321). In England, the nationalization of railroads occurred in 1948 and was part of the Labour Party's comprehensive plan to restructure the economy, although it is also noted that the goal was "to shield the railways from financial disaster caused by competition from road vehicles" (p. 33).[8] How can this view, which explicitly recognizes the existence of <u>competing</u> transport forms, be reconciled with one that still today perceives railroads as being a "natural monopoly," is hard to understand.

While in the U.S. railroads are not nationalized, it may be useful to note that their regulation too stemmed not from the perception of existence of economies of scale but of dishonest, discriminatory business practices. Davis, Hughes et. al. (1965) for example wrote:

> "It is interesting to note that the common thread running through most of the anti-railroad charges is one not of monopoly but of inequity... of charging different prices to different people for the same service" (pp. 311-12).

Their description of the process that eventually led to the intervention of, first the state, and then of the federal government, is also illuminating since it illustrates that such interventions may be obtained not necessarily through appeal to "cold facts," but rather through an emotional reaction set in movement by an unexpected change for the worse in a group's wealth:

> "The first serious complaints [against the railroads] were voiced by the midwestern farmers who, finding their incomes falling and unable to understand the nature of the world commodity market over which they had no control, chose to blame the railroads for their problems. Although many of their particular complaints were probably unjustified... For a time the railroads were able to ignore the farmers, but when they were joined by members of the business community, it was inevitable that the government would act against the roads" (p. 312).

A similar point was made by Hillhouse (1936), who wrote:

> "Burdened with debt for that which they did not own or control, forced to deal with representatives of absentee owners, victimized by swindlers or oppressive freight rates, it is no wonder that the farmers and localities of the midwestern states were stirred to revolt. The feeling was partly that of sectionalism. Repudiation of railroad air bonds provided at least one way of retaliating against eastern capitalists and against the railroads upon whom the farmers blindly pinned all their agrarian troubles" (p. 157).

A model of human behaviour that predicts such reaction will be mentioned later when the role of the state will be examined.

As to the second economic argument: externalities. Pryor wrote that:

> "Examples of negative externalities leading to nationalization occur in industries in which pollution or destruction of collective resources cannot be easily controlled without government ownership. Examples of positive externalities leading to nationalization occur in instances such as education, multipurpose river projects and production of high culture in which the benefits cannot be sufficiently captured by private owners to encourage private production" (p. 9).

Yet he notes that:

> "On externalities, we can use only intuition, not data. Therefore, this particular causal factor underlying the nationalization pattern must go untested. If industrial groups are ranked intuitively along an externalities scale, the relationship between externalities and nationalization does not seem strong" (p. 15).

One may just add that not only that there are no data showing any clear-cut trend, but one can hardly expect any to be built. For, the value of external effects is subjective (consider the attitudes toward the fire-arm industry in the U.S., or the military in general). Briefly, there is no factual support for the perception that there is a causal relationship between either economies of scale or externalities and the emergence of state ownership.

What is then the regularity one can find when looking at the emergence of state-owned enterprises will be summarized next.

II REGULARITIES IN THE CIRCUMSTANCES LEADING TO THE EMERGENCE OF STATE-OWNED ENTERPRISES

In spite of the enormous variations across countries and time in specific patterns that have led to the emergence of state-owned enterprises, some regularities can be detected. Shepherd (1976), Pryor (1976), Trebilcock and Prichard (1983) all agree that the principal influences which may lead to the establishment of public enterprise are: a) nation building; b) promotion of national security (among others by securing supplies); and c) significant changes in the distribution of wealth.

If indeed the evidence enables detecting these regularities, the question is: what view of human behaviour and of history can enable making the prediction that in these circumstances the intervention of state in various sectors is more likely? First, while it is clear that if one speaks about "nations" and "national security," the role of the state is evident, the context in which its intervention must be understood is international. Second, if significant changes in the distribution of wealth are linked with the changes in the role of the state, one must present some model of human behaviour in which such changes play a significant, direct role. Such a model is summarized in the next section: it links in a straightforward way individual and group behaviour with significant changes in perceptions on the distribution of wealth, whether on national or international level. The model provides

clear roles for the state, statesmen, politicians and chance, when a significant change alters a somehow achieved social order, the role being to restore stability. By what methods can this goal be achieved will be discussed later, once the principal features of the model are summarized. Since the model is a general one looking at some fundamental motivation of human behaviour, one cannot expect a precise prediction as to the nature of the state's intervention. But the model, if accurate, makes it clear that only by looking at the historical background can one understand the nature of this intervention -- a historical theorizing will never do.

Before summarizing the model, let's provide a sample of the interpretations that have been given to the emergence of state-owned enterprises. Sheahan's observation on France was the following:

> "Public enterprise has a long tradition in France but was made much more important by a series of nationalizations immediately after World War II. These nationalizations followed directly from an agreement reached by the National Resistance Council in 1943, opposing any return to the singularly inept version of capitalism France had known before the war. That kind of capitalism was one which relied on private enterprise, with very few exceptions, but which discouraged any active competition. Private agreements to restrain competition were not only accepted but backed up by legal regulations with similar intent. Government intervention was oriented mainly to protecting existing positions of all social groups, from each other and above all from any external competitive pressures. The natural result was that the country lost its ability to keep up with the outside world

> in new fields of industry, and began to lose its earlier capacity for scientific leadership as well" (p. 124, italics added).

We shall see in what circumstances the model predicts such behaviour of governments. Sheahan (1976) continues:

> "The 1943 agreement of the National Resistance Council in favor of public ownership of basic industries represented a consensus of dislike for the prewar economy but not one of purpose for the future. For some, the goal was to replace capitalism with gradually extended public ownership and centralized state control. A second vision was that workers should take over control of the public firms, independent of the state. The third interest was to use public enterprise restricted to a few basic industries as an instrument of planning to promote rapid modernization of the economy, while continuing private ownership for all sectors outside of energy, transport, finance and communications" (p. 125).

The ideological vacuum following wars, or other major disturbances, is common finding -- again, the model suggests an insight into this problem.

A similar insight is provided by Walsh (1978) in her detailed and massive examination of the public's business in the U.S.. She concludes that public ownership in the U.S. lacks an explicitly stated public policy, and that in the absence of a clear view of the role of public enterprise politics, has shaped public corporation haphazardly to fit specific, practical problems -- although the model will suggest a way to understand the order behind the apparent disorder. Coombes makes the same observation for the

U.K. noting that "State enterprise in Britain is normally identified with the undertakings called "nationalized industries" set up mainly by acts passed under the Labour Government of 1945-50. It has never been clear what the objects of those acts were" (p. 19).

Martinelli (1981) provides the following account of the Italian experience:

> "During World War I, the demand for steel, metal, automobile equipment and textiles fostered the rapid expansion of the industrial sector and deepened the involvement of major banks in growing businesses. After the war, the major banks experienced a liquidity crisis. To prevent the larger corporations from going bankrupt, the state intervened... Thus, in response to domestic and international crises, the Italian government created a temporary state agency, IRI, to rescue the country's indebted firms" (p. 87)... "In 1953, the government established ...ENI... [which] under the aggressive leadership of Enico Mattei, ENI's first president, the oil industry in Italy, vital to industrial growth, was developed. Mattei was given considerable autonomy in developing the oil industry, in part because he was an experienced businessman, in part because he shared certain goals with the ruling party. Fanfani, the new secretary of the Christian Democrats wanted to strenghten the party organization by penetrating the major decision making centres" (pp. 89-90).

and Martinelli concludes that increasingly the ruling party has tried to use state ownership as an instrument to implement stabilization policy "without significantly changing class relations or political relations" (p. 92) -- notice again the reference towards the goal of maintaining a somehow achieved

status quo, the reference to international affairs and the role individuals play. As already noted, all three features play explicit roles in the model.

In order to avoid any misinterpretation, it should be made clear that the notions of wealth distribution and classes that play roles in the model is not the "classical," dogmatic "capital" versus "labour" type, but of any two classes.[9] The next episode -- Vining's (1981) detailed account of the origines of Ontario Hydro -- illuminates the difference:

> "Ontario Hydro was conceived more in the tradition of an older ideological struggle, the bourgeoisie versus the aristocracy. The conflict pitted the small industrialists of towns such as London, Berlin, and Hamilton against the "nobler barons" of Montreal, London, and New York" (p. 152).

Vining also notes that "fear of U.S. industrial competition and perceived overreliance on U.S. coal supplies played an important role in generating momentum for public ownership" (p. 153), and he concludes:

> "...This kind of division, with important variations, has played an important role in the development of each of the hydros. The lines of pluralistic battle in Ontario were drawn on several dimensions: Toronto versus the hinterland, trust entrepreneurial capital versus small, industrial entrepreneurs, foreign versus native interests being the most important" (p. 153).

The threat of foreign influence seems also to be a factor in the origins of Air Canada. According to Langford (1981):

> "...there was by 1936 strong pressure for the creation of a national inter-city air service for passengers and mail. In part, the pressure came from the expansionary tendencies of private American airlines... As Tupper and others have argued, the environmental combination of retarded private initiatives and the threat of foreign domination traditionally called for some form of nation-building or community development activity by the federal government" (pp. 252-3).

Langford also quotes Bothwell and Kilbourn, who wrote:

> "In the depths of the Depression, the airway offered hope of dramatic future growth and a way out of despair. They also offered a potential new East-West link for a transcontinental nation, reinforcing that of the railways, and counter-balancing the North-South pull of the highways which first became an economic force in the 1920s" (p. 252).

Tupper and Doern (1981) also note that "the establishment of the Canadian Radio Broadcasting Commission in 1932 was a classic instance of defensive expansionism and the use of state enterprise to counteract the threats posed to Canadian identity by the American media. In this case the choice was clear -- "it was the state or the United States" (p. 11). The fear of falling behind other groups, not always necessarily "foreign" ones seemed to have played significant roles in the emergence of state ownership. According to Tupper (1981):

> "The need to protect Alberta's economic interests from potentially hostile external forces was the dominant theme in the government's public explanations of the PWA acquisition... the real threat, in the government's view was posed by the White Pass and Yukon take-over bid. That company's bid was particularly ominous, for as well as operating a railroad between Shagway and White Horse, White Pass and Yukon owned other transportation interests along the British Columbia Coast and in the Yukon... Speaking of the possibility of a White Pass take-over, Don Getty remarked: "It was conceivable that such an acquisition would seriously threaten Alberta's position as the Gateway to the North through development of a traffic pattern from British Columbia to the Yukon, Northwest Territories, and Alaska, rather than through Alberta" (pp. 288-9).

While the details of the story differ, one can identify similar arguments in the emergence of the Potash Corporation of Saskatchewan (Laux and Molot (1981), pp. 190-4, 210-11) and of the National Asbestos Corporation of Quebec (Fournier (1981)).

The conclusion that crises (in the form of wars, threats, of rising unemployment in particular) have a major impact on the roles of governments is reinforced when one looks at other features of the European experience. According to Noreng (1981), for example:

> "During World War I, the economic and strategic importance of oil was clearly demonstrated. After the war, several West European governments took action to secure foreign oil supplies... The first oil nationalization of Western Europe began in the United Kingdom. In 1914, the British government became part owner of the Anglo-Persian Oil Company, now British Petroleum, to secure foreign oil supplies for military needs. Britain's willingness

> to enter into a position of ownership in an oil company stemmed from its desire to avoid reliance on foreign oil supplies in times of crisis... France participated in the redistribution of the old Turkish Petroleum Company, securing oil concessions in the Middle East for the first time... In 1926, faced with the same concerns as France over depending upon foreign oil suppliers, Italy established Agip, a public company to explore and produce oil abroad" (p. 133).

While in Canada "nation-building" seemed to have been frequently put forward as an argument justifying state intervention, in form of ownership in particular, in Europe where "nations" already exist, the threat to their sovereignty has been used as a more frequent argument. Although the distinction between these two arguments is not always sharp: statesmen in Europe seemed (in more recent times) to have struggled with the question of how to rebuild, rather than build, a "nation," when during wars fractions of the population collaborated with the enemies. There was no question that the collaborators had to be punished -- but how? In France and in Austria, the punishment took, at times, the form of confiscation -- the transformation of Renault to a state-owned enterprise because of this reason serves in French historical memory as a permanent, symbolical reminder of type of punishment that may be inflicted on traitors (who are rich, the poorer may either be executed or go to prison. The latter may not be perceived as sufficient punishment for the richer, who, once out of prison can still benefit from their unpatriotic behaviour).

The brief summary of the evidence on the origins of state-owned enterprises in these first two sections provide sufficient background for understanding that if one wants to shed light on the origins of state-owned enterprises, one needs a model of human behaviour where the role of the state can be clarified. Such a model is summarized next. Once its essential features are known, additional questions concerning state-owned enterprises, like "privatization," effects on competition, performance, etc., will be briefly examined.

III ON DECISION MAKING AND THE ROLE OF THE STATE

The previous sections described the origins of some new institutions. Thus, any model that tries to shed light on such emergences must deal with these questions: in what circumstances are people more likely to deviate from the status quo, from the beaten path and try new institutions? Why do people change their minds, on political strategies in particular? Why do they bet on new ideas and implement them? The views presented in Brenner (1983, 1985) (the mathematical translations are also summarized there in appendices) suggest that bets on new ideas are triggered when customary ways of behaviour, failing significantly to produce the expected results, lead to the perception of a loss in one's relative standing in a society. One can define this adaptive behaviour as being due to "envy," "ambition," or "fear of being hindered by others." The perception and these sentiments lead to the following types of behaviour:

- people may start to participate in games of chance that they have previously shunned;
- they may commit a crime, or an act not in accordance with existing customs;
- they may gamble on new (i.e., non-customary) ideas in business, science, technology, the arts and politics. The attractiveness to gamble on political ideas is greater when a whole group's

standing in a society or the society of nations has been significantly worsened.

And the contrary: when aspirations are more than fulfilled, and people suddenly outdo their fellows, they:

- tend to make out insurance that previously they shunned;
- may avoid committing a crime that they contemplated before;
- may avoid betting on new ideas.

Finally, when aspirations are realized, not much can be said: the relatively rich spend a relatively greater fraction of their wealth on insurance, while the relatively poor, a relatively greater fraction on games of chance where they can lose relatively small sums, but have a chance to win big ones. These predictions are made by assuming that individuals try to make their best when facing uncertain prospects, and that the wealth distribution is pyramidal. That is, that there is a small "upper class," a larger "upper middle class," a still larger "lower middle class" and so forth. Implicitly, however, there are additional assumptions made: the incentive to gamble on new ideas appears when suddenly an individual's position in the wealth distribution has been (or is expected to be) significantly worsened. The incentives disappear if either customs or redistributive taxes existed which would lead to expectations that the individual will be compensated

for his loss. In these circumstances, the somehow achieved order (or status quo) will be maintained.

There are some good reasons for such customs or such system of taxation and redistribution to evolve (eventually), if these views of human behaviour are accurate. For, they predict that when an individual's situation is relatively worsened, he may gamble not only on an entrepreneurial act, but also on a criminal one, which is costly for a society. Moreover, if a whole group's position in the wealth distribution has been significantly diminished (when a product became obsolete, for example), the probability that they will gamble on political, including revolutionary, ideas advocating redistribution of wealth in their favour, increases. Since such gambles too are costly for the society, redistributive policies or customs requiring redistribution of wealth may provide remedies which maintain the stability of the society, simultaneously, however, diminishing its creativity. But notice that if in such societies one happened to have a fluctuating life (in spite of all insurances), and becomes eventually creative, he may be perceived in a negative light and may be discouraged to implement his ideas. For, his rise in the wealth distribution is expected to motivate those who fell behind to gamble both on additional entrepreneurial acts and on criminal ones. Both are viewed as costly since they are expected to lead to further fluctuations in people's positions in the wealth distribution.

Before discussing what is the role of the state, statesmen and politicians within this model, it is useful to point out first the definitions of "entrepreneurs," "profits" and "productivity" within it, for two reasons: first, because they are different from the customary ones, and second, the terms play an important role in discussions on the evaluation of the performance of state-owned enterprises.

An entrepreneur is an individual who bets on a new idea and implements it. The entrepreneurs we remember are those who made lucky hits. This view of the entrepreneurial act means something strikingly different from the view that some individuals are "risk lovers" and thus take risks, and has far-reaching consequences for understanding how firms operate. A "risk lover" is defined in the traditional economic approach as an individual who is willing to participate in unfair gambles, a trait attributed to abstract conditions on the shape of the utility function. In contrast, in this model, one's willingness to take risks is related to a perception of a significantly worsened position in the distribution of wealth. This view enables one to show that profits are related to the creation of new wealth, when entrepreneurs make some lucky hits either by themselves, or if they understand the human attitudes outlined here (even if they do not know to articulate them), they give proper incentives to employees to bet more frequently on new ideas, who thus become more "productive" (such entrepreneurs can be defined as possessing

"managerial skills"). In contrast, in the traditional theory of the firm, production functions and relative prices are all given, and the only thing "profit maximizers" are assumed to do is to adapt to changes in relative prices, but never to change them by themselves. Briefly, within this model, firms can be characterized not by the goal of making profits, but by individuals who make decisions and calculate risks. The surviving entrepreneurs, managers and firms are those who have been either lucky, or made less mistakes (ceteris paribus, i.e., in the absence of political intervention in particular). It is from this viewpoint that comparisons can be made between state and privately owned enterprises within this approach (eventually, in another study).

What is then the role of the state within this model? Leapfrogging among groups (i.e., the process of some groups being outdone by their "fellows") increases the probability that those who fell behind will commit non-customary acts (criminal, revolutionary, entrepreneurial). By promising actual and future redistributive policies, statesmen and politicians try to restore stability, but they walk on a tightrope: while expectations of such redistributions diminish instability (social and political), they may simultaneously diminish the incentives to engage in entrepreneurial acts in general (because of the higher expected tax rates and lowered aspirations). Yet, some degree of stability is also necessary to enable entrepreneurs to make any calculations of risks. As the evidence discussed already and the ones

discussed later suggest, state-owned enterprises have emerged when such leapfrogging occurred and they have been used to achieve all these goals. Following major crises, governments intervened in order to enable to have some fixed points of reference in the middle of sudden chaos -- state-owned enterprises have played their role by indicating commitment to a particular direction. (Unsurprisingly, there is a wide variation in the specific nature of the ideas that have been pursued: some individuals' ideas are followed in these circumstances, whose precise nature cannot be predicted (see Brenner (1983, 1985) for the mathematical translation of these statements). Also, state-owned enterprises have been used to try to maintain stability by policies of controlling the unemployment rate (thus protecting and insuring some groups' position in the wealth distribution). But once the perception became that the pendulum had swung "too much" in the direction of protection, a tendency emerged to swing it back and encourage a more entrepreneurial attitude. This has been done either by betting on ideas of "privatization," or by cutting customary benefits, funds, subsidies (policies, which in the light of this model, may turn out to be successful).

The arguments on leapfrogging can be extended in a straightforward way to international rather than domestic relationships (only the vocabulary one must use to describe events differs), obtaining similar predictions. Of course, the role of statesmen and politicians becomes now more complex: what will they advocate

if they perceive that a "neighbouring" nation ("neighbouring" as defined by existing technology, military or other) is suddenly outdoing them? Again, the model (and the evidence) suggest that people walk on a tightrope: such leapfrogging process has a destabilizing effect, leading sometimes to wars, while other times to an entrepreneurial outburst in the nation that fell behind, an outburst initiated by a statesman's ideas and, frequently, through policies initiated by state-owned enterprises (what other methods are there to suggest to the population a commitment towards a new policy, forced upon one nation by external developments?).

Yet at this point one may raise an additional, fundamental question: since forces exist within this model to restore and maintain stability, domestic and external, what can disturb the somehow achieved order and can shed further light on the role of the state? The answer that innovations can be the cause is not satisfying within this model, since, in a sense, they are endogenous. One answer given (and verified) in my two books is that, in a historical perspective, increases in population (more correctly in the number of people with whom interactions can be expected) that were beyond control, have disturbed the somehow achieved order. As a result, governments frequently struggled with the question of how to relink an increasing number of people -- a number of enterprises owned by the state can be viewed as attempts to deal with this question. This struggle is linked with the traditional roles attributed by both economists and political

scientists to the state: to maintain law and order, to enforce contracts voluntarily entered into and to define property rights. This is easier said than done: while during some times having the same religion was perceived to diminish significantly contract uncertainty, during others cheaper communication methods (postal, travel, etc.) were expected to achieve this goal. But few social scientists examined the practical question of how can the state achieve these goals when the population is growing and customs are destroyed. Even if one accepts with reservation the next quoted generalization, it seems illuminating and saves on further theorizing (which together with evidence can be found elsewhere).[10] Lord Durham (1938) in his Report on the Affairs of British North America wrote:

> "I know of no difference in the machinery of government in the old and new world that strikes a European more forcibly than the apparently undue importance which the business of constructing public works appears to occupy in American legislation... The provision which in Europe, the State makes for the protection of its citizens against foreign enemies, is in America required for... the war with the wilderness. The defence of an important fortress, or the maintenance of a sufficient army or navy in exposed spots, is not more a matter of common concern to the European than is the construction of the great communications to the American settler; and the State, very naturally, takes on itself the making of the works, which are a matter of concern to all alike" (as quoted by Aitken (1967), p. 183).[11]

While the approach summarized here is novel, the interpretation of the facts (on the role of the state in particular) and policy

implications towards which it may sometimes lead had been given by some social scientists: a few of them will be referred to in the next section, but an elaborate discussion of theirs and others' views can be found elsewhere.[12]

IV STATE-OWNED ENTERPRISES - FURTHER EVIDENCE AND VIEWPOINTS

Let's summarize both the model's predictions that may illuminate the emergence of state-owned enterprises and the facts:

- The model suggests that such interventions will emerge following some "leapfrogging," i.e., a perception of a "drastic" change in a group's position in the distribution of wealth, domestic or international. This observation has been made by almost all the studies written on the subject (see, in particular, Shepherd's (1976) Summary, p. XIII). Moreover, studies written on broader subjects -- government intervention in general -- have concluded that "crises" are the source of government intervention, and politicians and statesmen struggle with the question of how to disperse the shocks (see Hughes (1977); or, in even broader historical perspectives, some writers link the disturbances to fluctuations in population, see North (1981), McNeill (1982) and others).[13] Indeed, Vernon (1981) concludes in a review of a conference on state-owned enterprises that there may be no reason to study them as a separate subject; that a study of the relations of governments to <u>all forms</u> of intervention would be more fruitful (p. 15).

- Individuals and their ideas play central roles in the model. Thus, while the model enables to make a prediction on the

general trends that will be advocated in some circumstances, it also shows that one cannot explain the particular case. Chance plays a role. Many writers have pointed out the apparent disorder in reactions and have suggested that because of it no "general approach" can be built. Yet the model summarized here suggests an explanation for both the perceived regularity and the disorder.

- Following "crises" (as defined in the model), some people bet on new ideas. Thus a babble of voices is heard. The model suggests that the way out of the disorder is when a relatively large group finally bets on one individual's ideas, call him a statesman or a politician.[14] Indeed, all the case studies (referenced in the bibliography) summarize the debates that took place, notice the confusion, and emphasize the roles individuals played in the process.

- The changing goals from promoting entrepreneurship towards maintaining the status quo and redistributing wealth -- and back -- is not necessarily a sign of confusion, but a shift that can be expected, depending on changes in domestic or external circumstances. Such a change is related to the role of the state, as explained in the previous section.[15] The observation on the changing goals is made by Chandler (1983), Noreng (1981) (who, for example, shows that the enterprise created to support a branch of high technology finds itself

diverted to maintain jobs, while an enterprise that emerged to support farm incomes is used to hold down urban food prices (notice that the change leads to a redistribution of wealth)), and in the broader context by Hughes (1977).

- Many studies concentrate on the issue of profitability of state-owned enterprises. It is not always clear what can one learn from an a-historical interpretation of numbers. Suppose that an enterprise is set up to diminish a threat. Part of the measured "loss" of the state-owned enterprise can be interpreted in a similar way as expenditures on arms, army and police. In what sense can one say that the latter expenditures are "a loss ?" True, just like sometimes total expenditures on the military can be perceived as being "excessive," so can people perceive expenditures related to a state-owned enterprise. But that means that the examination of the numbers must be done in a historical context and raise, among others, the question whether or not the circumstances that have led to its emergence have disappeared, or that the perception was erroneous to start with. In the Canadian context where the building of a nation has been frequently put forward for justifying the emergence and persistence of some state-owned enterprise, those who just criticize their lack of profitability may be on the wrong track. For, nobody can put a precise price tag on the goal of "nation building." Instead, the approach must raise the

question whether or not the enterprise can fulfil the goals for which it has been created, or time made both the goal and the enterprise obsolete. Comparisons between profitability of state-owned enterprises in different countries cannot be always illuminating either. In some countries, national airlines seem to be perceived as a matter of pride (if one gives to their existence a positive connotation, "vanity" if one gives a negative one), of trying to raise the aspirations of the people (recall, an argument also given for Hydro-Quebec), in others they are perceived to be linked with the perception of security (in Israel with good reasons, as the airlines' reaction during crises have showed), while elsewhere they are just a rapid method of transportation and are privately owned. What can one learn from the different profitability of the enterprises in the three types of countries?

- The most frequent argument in the literature on state-owned enterprises concerns, implicitly or explicitly, the redistribution of wealth by compensating groups who fell behind. Some authors put the argument bluntly, stating that workers expected to have higher wages and more protection when an enterprise is state-owned, while others put it in vague terms of "improving social relationships within enterprise." Shepherd (1976) notes that the goals of state-owned enterprise include "some degree of improved

equity by making output cheaper than it otherwise would be for needy citizens"... "an improvement in the regional and urban balance of enterprise activities" (p. XII) without ever clarifying according to which model of the world can these changes be perceived as "improvement," or what is the implicit view of the state underlying such statements. Notice, however, that in terms of the model on which my arguments rely, it is not "the wealth distribution" that matters, whether or not it is more or less equal, but the perception of disorder, of suddenly falling behind. A few studies on state-owned enterprises drew attention to this point explicitly. Nelson (1976) wrote that "if an industry becomes too profitable, and if its profitability cannot be controlled, or should not be controlled, or administratively cannot be controlled, then the public should have the right to acquire the industry.... This principle was written into French policy with the authorization for the first railway line" (p. 52), while Pryor (1976) suggests that "large unearned income" (p. 9) may lead towards state ownership, noting that "certain production leads to large incomes which are considered unearned. This occurs in some mineral mining, as well as in natural monopolies" (p. 9). While Pryor (1976) does not clarify with precision either the notion of "unearned" income or what view of human behaviour justifies state intervention in this case, his observation seems accurate in the light of the model. If, by chance, a

group's wealth increases and others fall behind, the model predicts some destabilizing effects, which governments will try to mitigate.[16] Although, as already emphasized, the model cannot predict by what instrument exactly: state ownership is one possibility, but there are others -- a windfall tax, for example. Buchanan and Tideman (1974), examining the regulations in the gasoline market after 1973, suggest that the state intervenes when a market crisis wrecks the customary balance between producer interest and voter apathy, and, in a response to a large and sudden rise in relative price, it becomes a "broker" for a consumers' buying monopsony, rather than continuing as a broker for a producers' selling monopoly.

The view underlying Buchanan's and Tideman's seems to be that of a politician facing choices, and whose decision is dominated by a vote maximization objective. Trebilcock and Prichard (1983) adopt this view uncritically in their examination of state-owned enterprises. Yet a fundamental criticism must be drawn on this view of the world: notice that within it, politicians (or individuals in general) don't matter: their ideas just mirror what they perceive to be the opinion of the majority. But those adopting this approach never address the question: how did the majority form its opinion, in the new circumstances in which they suddenly found themselves, to start with? Whose ideas is the majority following? If the answer to this question is that the

ideas of "leaders," "statesmen" are followed, then such individuals must play central roles in the argument explaining the political process,[17] but in the model of vote maximization they don't.

Borcherding (1983) comes close to my arguments (admitting that he lacks a theory, but prefers dealing "imperfectly with what is important than to attain virtuoso skill in the treatment of that which does not matter" (p. 148)), who, summarizing the view of a number of scholars, concludes that the "excess" costs attributed to various forms of government intervention represent the effects of redistributing wealth.[18] Aharoni (1983) makes the same point and goes one step further linking the notion of redistribution with "insurance":

> "Whatever the original reasons for their creation, these enterprises have been used to shift risks to the public sector by protecting declining industries, by bailing out ailing firms, by guaranteeing input prices to the private sector, or by shielding workers against unemployment. Many of these enterprises have suffered heavy losses, partially at least as a result of their function as a protector and insurer... In the 1960s and 1970s, these enterprises were used to protect workers against the risk of unemployment and to save private entrepreneurs in declining industries from suffering losses. Dozens of private enterprises were acquired by governments in Germany, France, Italy, The Netherlands, Sweden, and the United Kingdom in order to prevent the collapse of their firms. Thus, the hard-coal industries in Britain, France, Italy, Spain, and West Germany were brought under state ownership to avoid closure... SOEs were created to assure guaranteed employment to thousands of workers. In many of these cases, the

new plants suffered heavy losses, yet were not allowed to reduce their work force" (p. 167).

But the role played by the state as an "insurer," and using state-owned enterprises for this goal, raises a further problem in interpreting their "lack of profitability." Costs being defined as foregone opportunities, the scholar interested in this question should look at the expenses the state (i.e., the taxpayers) would incur if the enterprise was left to go under. If the unemployment benefits, costs of dislocation, etc., are perceived to cost, say, $1 billion, while maintaining the state-owned enterprise at $750 million, state ownership will be perceived as "profitable."

While everywhere state-owned enterprises have been used to deal with preventing a rise in unemployment rates in certain areas (consider Air France's and Renault's experiences in France, or the numerous interventions in Italy to save textile factories in the Alps, near Rome, etc.), it would be misleading to interpret the policies as attempts to make "social reforms." The policies have dealt with localized fires in attempts to maintain stability.

- As noted, the goal of building a nation has frequently led to the emergence of state-owned enterprises. Although, it should be noted that this goal too is frequently linked with the issue of wealth distribution, regional in particular. The Italian case is revealing: the Italian South (the Mezzogiorno) was and is poorer than the North. It was poorer

in the last third of the ninth century, and the situation did not seem to improve following national unification (according to Sheahan (1976), the region may have even set back). In part, the setback was later attributed to regulations introduced by Mussolini, who designated the South as the agricultural base for his ideal of an autarchic, self-sufficient national system. How can an erroneous regulation be corrected? Either by cancelling it (but such drastic, abrupt steps are not always easy to carry out if people have adapted themselves to the existing regulations), or by compensating for it. In 1957, a law was passed requiring state-owned enterprises to locate 40 per cent of their existing investments and 60 per cent of new ones in the South, while in 1971 these members were raised to 60 and 80 per cent, respectively. Without explicitly relating "nation-building" with the notion of wealth distribution and the perceptions of falling behind, implicitly this is what the next paragraph in Trebilcock and Prichard (1983) imply:

> "The notion of nation-building is discussed throughout the literature on public enterprise. For example, Tupper, labelling this concept community development, emphasizes the function of integrating and building robust autonomous political communities in inhospitable environments. The inhospitable environment refers to the difficulty of developing integrated communities, given the American presence to the South significant regional identities and the characteristics of the Canadian economy noted by Innis. Tupper notes that private enterprise may not be willing to extend transportation, message communication

> and power facilities to isolated areas with small populations, since the cost may exceed any reasonable revenue expectations. As a related concern, there is also the threat of economic and political domination by the United States if the Canadian government fails to act in those situations where domestic private investment is not forthcoming. If the only real alternative to public enterprise is a foreign-owned private firm, the government in some sectors may perceive its options to be foreclosed" (pp. 53-4).

Although, as noted already, the last, deterministic statement does not follow: "equalization" payments could be perceived as substitutes for policies of state-owned enterprises.

Conclusions

In the extensive literature on public enterprises, the authors frequently attribute their failure to the fact that:

> "No general theories of public enterprise or defined goals in the public interest [have been articulated], that might be reasonably imposed on government corporations... The cure lies not in eliminating independent government corporations... but in defining, developing, and applying to them some long-range public goals" (as Walsh (1978), p. 341, for example, puts it).

Sounds appealing? Maybe. But while in theory one can define and develop a "public goal" (implicitly the model presented here does so), one cannot recommend applying it in just <u>one</u> society. Such one-sided policy is dangerous. Instead one must turn back to John Stuart Mill's vague recommendation that the proper

justification for the role of the state is the "comprehensive one of general expediency."

Some criteria for increasing the effectiveness of state-owned enterprises nevertheless emerge from this study:

- The arguments and evidence suggest that their roles have been to diminish contract uncertainty (in a broad sense) and maintain social stability. Thus their emergence and persistence should neither be viewed as a puzzle, nor with suspicion. Their emergence is not simply a matter of politicians trying to maximize votes for their own private benefit (although their persistence may be, at times, related to such an argument).

- The benefits of state-owned enterprises depend on specific historical circumstances. But since frequently no standards exist against which to test the effectiveness of this particular instrument (in contrast to a privately owned enterprise that may simply go bankrupt), at regular intervals of time, one must re-examine whether or not the circumstances which led to their emergence still persist (today, obviously, the postal, telephone and the long overdue railway regulations or state ownership should be up for such reviews). If such re-examination is not done, interest groups develop, and theories will be invented that will justify maintaining the

persisting order. As the evidence suggests, the more immobile immobility is, the longer and surer its duration.

- As noted, the "disappointing" financial performance of state-owned enterprises has been attributed to the roles they played in maintaining social stability.[19] If frequently this was their goal -- as the evidence suggests, and the model presented here suggests a rationale for such role -- a policy suggestion can be made to have a criterion for evaluating their performance. Vernon (1981) notes that:

> "Great Britain, Sweden, Italy and France... have experimented at various times with a common approach. They have undertaken to identify the social tasks that they expected the state-owned enterprises to perform; to provide subsidies to such enterprises equal to the cost of these tasks; and thereafter to demand that, with the help of such subsidies, the enterprises should be financially self-sustaining" (p. 17).

While the principle has not been consistently applied, it seems to be worth the try. At least it would force the government to re-examine whether the goals still fit the circumstances, or they became obsolete.

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Footnotes

1 See Brenner (1983, 1984a,b, 1985).

2 See, for example, Delion (1978) who justifies state-owned enterprises in terms of rationalizing the national scale of economic functions, Finbow (1983) who justifies them in terms of "infrastructure," "basic industries," and others, criticized by Tupper and Doern (1981) who "explain" it by "pragmatism," which as they, quoting Reginald Whittaker, say "is usually an excuse for an explanation which remains to be given." The term is vague, theoretical catch-all, which provides little insight into the confluence of ideological, material, technological, and jurisdictional imperatives that underpin the state's expansion" (p. 11).

3 See Borcherding (1983).

4 Almost all the studies that appear in the bibliography repeat these points.

5 The marxist approach does not fit into the category identified today as economics.

6 This argument is based on Coase's (1936) well-known observation, but which is descriptive rather than predictive, that the market mechanism is not always used because it is costly to use it. Thus some transactions are internal to the firm. An alternative view of "the firm" is presented in Brenner (1985), ch. II.

7 This point is important: as Walsh notes "Like U.S. public enterprises, those of West Germany are not products of socialist movements or of explicit ideologies of public ownership. Since the feudal lords ran profitable enterprises and medieval cities provided services essential for local trade and commerce, certain economic and administrative activities -- particularly warehousing, ports and markets -- have been considered governmental responsibilities" (p. 313). Why? We do not always know. We cannot question the origins of <u>all</u> our customs, of all the things that we grow up being used to and being taught to practice. In particular government budgets and policies, towards state-owned enterprises in particular, can never be re-examined all together, as compared to all possible alternatives. See Klein (1966) on an elaboration of this point and Coombes (1971), who also notes the lack of questioning for state ownership in Sweden (p. 182).

8 See Robson (1960). At this point one can already ask: why is today the argument on "natural monopoly" so frequent, in spite of the lack of evidence? The answer may be that for economists trapped in the lines of thought of the neoclassical tradition, whose language non-socialists have adopted, that was the main justification -- within their model of the world -- for state intervention. For the more profound reasoning underlying this answer, see Brenner (1984, 1985).

9 In marxist analysis, welfare expenditures are perceived as an investment in social control made necessary by the disruptive impact of capitalism. See Klein (1976) and O'Connor (1973). While there may be a superficial resemblance between this and my arguments, see the significant differences in Brenner (1983), ch. VI, and an elaborate discussion in Brenner (1985), ch. VII.

10 See Brenner (1983, 1985).

11 As Davis, Hughes et. al. (1965) notes: "The United States needed an extensive transport and communications network before its internal market was large enough to support a modern industrial economy. Again, in the modern world some economically feasible power source is required before development can begin; however, because of technological indivisibilities, minimum plant size is frequently so large that the underdeveloped economy cannot profitably utilize its output in the foreseeable future" (p. 163). Notice that both arguments are implicitly linked with expectations for population growth, which, where immigration is concerned, also depends on political decisions.

12 See Brenner (1983, 1985).

13 For a summary, see Brenner (1983, 1985).

14 And the individual, in turn, perceives the turn in the emotional tidal wave.

15 This argument does not exclude the possibility that the decision to change the goals was erroneous. Doing mistakes is an inherent part of the model. But since mistakes are costly and diminish wealth, the model suggests mechanisms for correction.

16 Hughes concludes that "Too little social control led to the great turnabout of 1911-1914, when the federal nonmarket control establishment was launched in the name of reform. Nearly a century later we need to change the mixture again and let in more freedom" (p. 242). The same suggestion emerges in Davis, Hughes et. al. (1965) when they examine the history of railways, attributing the current problems, in

part, to regulations that have not been changed in spite of the altered circumstances. Also see L'Hériteau (1972), Delion and Durupty (1982), p. 19, on the changing goals, and the studies in Vernon and Aharoni (1981), Grassini's in particular. Implicitly, Olson's (1982) argument too can explain the change in goals in broad context.

17 See Mackay and Reid (1979), Reid (1977) on specific discussion on the political markets and criticism on existing models, and Brenner (1983, 1985) for detailed discussion on the implications of this argument. It may seem, at first sight, paradoxical that many economists have adopted this view of the political market, when, with miniscule variations they themselves followed the ideas of Smith, Keynes and some other brand names. But, maybe, after all, this situation is not so paradoxical. For, those who follow this approach don't really have their own opinion, but they share that of a group. So they may extrapolate such behaviour to the political market too.

18 Although his argument, relying on Becker, that "rational expectations" characterize the market for political influence is meaningless when viewed through the light of my model, where the word "rational" cannot be even defined (the word that can be used is "expectations that people got accustomed to," which of course has very different implications). Why does Borcherding believe in this idea, considering the Hitlers, Maos, Stalins, etc., of modern history seems to me a puzzle (after all, he seems to take a historical perspective when looking at the subject).

19 How skeptical one must be of numbers whenever one looks either at state ownership, or the state as part of a transaction comes also to fore when one looks at the following interpretation of some facts: "Presumably for theological reasons, the U.S. government tends to shield workers against the risk of unemployment by granting contracts to private enterprise or by the creation of pseudo-private enterprises, such as CONRAIL, rather than resorting to state ownership. Public services are also supplied through government by contract... The major advantage of contracts is that they offer a detour around a conservative belief system... They permit elected officials to claim balanced budgets and conservative economic policies while distributing projects and contracts funded by public debt... Incentives for efficiency, productivity, and management improvement are weak in that portion of the private sector for which the government is the major customer and in which the cost-plus contract and variations of it are commonplace... These efforts put free enterprise rhetoric to work in extracting private profit from government expenditure" (p. 167, Aharoni (1983), quoting, in part, Walsh

(1978)). It should also be noted that the method suggested in the text requires the so-called "counter-factual" analysis, which demands a lot of imagination, it is rarely done, and even more rarely done well.

THE ORIGINS OF THE CANADIAN WHEAT BOARD

by

Abraham Rotstein
professor of Economics
University of Toronto

RÉSUMÉ

Qu'elles le veulent ou non, les entreprises publiques sont devenues les méchants dragons que des chevaliers de l'économie canadienne cherchent à terrasser. " Le gouvernement canadien collectionne les entreprises publiques de la même façon que certaines personnes collectionnent les timbres ", déclarait récemment l'éditorialiste du " Journal national du Canada ", sur un ton fortement moralisateur[1]. Il soutenait que d'importantes entreprises publiques, comme Air Canada, le Canadien National et Petro-Canada, devraient être vendues, notamment pour les rendre plus sensibles au jeu du marché et libérer des fonds pouvant réduire la dette nationale. L'article se terminait par un argument " hautement rationnel ", prônant qu'il faut " économiser les ressources du pays en faveur des domaines où la présence de l'État est vraiment nécessaire "[2].

Disons que cet éditorial reflète bien, en bref, l'ambiguité qui entoure la question des entreprises publiques au Canada. Ces sociétés ont proliféré malgré les marques de désapprobation théorique à leur endroit, et celles particulièrement des gouvernements conservateurs, fidèles partisans de la libre entreprise. Ainsi, l'achat par la province de l'Alberta de la Pacific Western Airlines, et le fait qu'elle ait parrainé plusieurs sociétés provinciales d'exploitation de l'énergie, en sont de bons exemples; nulle part au Canada ne lève-t-on autant de

troupes pour la défense du secteur privé. Voilà le paradoxe qui entoure la prolifération des entreprises publiques au Canada, particulièrement au niveau provincial.

Pour faire valoir le même point, mais de façon différente, revenons à la dernière phrase de l'éditorial du Globe déjà cité : il ne faudrait implanter d'entreprises publiques que dans les " domaines où la présence de l'État est vraiment nécessaire ". D'où, bien sûr, la question suivante : Comment ce journal se propose-t-il de déterminer les domaines ou les situations exigeant cette présence ? Sans de tels critères, on risquerait fort qu'avec trop de hâte, la privatisation de certaines entreprises publiques soit mal orientée ou prématurée.

A moins d'examiner cette question sur un plan analytique ou théorique, le débat ne reviendra qu'à un exercice futile, non concluant, un simple jeu de yo-yo entre des nécessités mal perçues et des postulats rationnels qui n'ont rien à voir avec la réalité économique.

L'étude des origines de la Commission canadienne du blé nous donne une image nette, en gros plan mais au ralenti, de quelques-unes des grandes questions à l'ordre du jour du débat sur les entreprises publiques. Pendant plus de quatre décennies, les discussions se sont poursuivies au sujet de la meilleure façon d'organiser l'économie du blé. D'un côté, les tenants du marché

libre défendaient fermement les activités de la Bourse des grains de Winnipeg, soutenant qu'il s'agissait du meilleur système possible. De l'autre, une kyrielle de syndicats coopératifs de mise en marché du blé, et un nombre vague de protestataires agrariens cherchaient les moyens d'éviter les excès et les injustices qu'ils attribuaient à cette Bourse des grains. Éventuellement, ils optèrent pour un " monopole gouvernemental ".

La solution au problème n'a pas été le fruit d'une décision élaborée en faveur de l'une ou l'autre école. Trois crises économiques imprévues, auxquelles les deux parties au débat n'avaient rien à voir, ont fait opter pour une solution favorable à l'établissement d'une entreprise d'État. Fait paradoxal, cette décision a été prise malgré l'engagement explicite du gouvernement libéral, alors en place, en faveur d'un libre marché du blé.

La Commission canadienne du blé s'est révélée efficace et sensible à l'évolution de la conjoncture économique. Aujourd'hui, quelque 40 ans après sa création, elle jouit encore d'une très bonne réputation chez les producteurs de blé.

Il semble donc que certains mécanismes, tout inacceptables qu'ils soient au plan théorique, donnent dans la pratique de fort bons résultats.

Nous passons maintenant à un aperçu de certaines questions théoriques, suivi d'une courte rétrospective sur la Commission canadienne du blé.

I INTRODUCTION

Crown corporations are the reluctant dragons of the Canadian economy. "The Canadian Government collects Crown corporations the way some people collect stamps," states a recent editorial of "Canada's national newspaper," in a tone of high moral disapproval.[1] The editorial advocates that certain major Crown corporations such as Air Canada, Canadian National Railways and Petro-Canada be sold. Several reasons are offered: to make these corporations more responsive to the marketplace and to free money to reduce the national debt. The editorial concludes by offering its "basic philosophical point," namely "to husband the country's resources for areas where a public presence is truly needed."[2]

In capsule form, this editorial is emblematic of the ambiguity that surrounds the issue of Crown corporations in Canada. These corporations have proliferated in the shadow of philosophical disapproval, particularly with Conservative governments that proclaim a strong adherence to the free enterprise system. Alberta's purchase of Pacific Western Airlines for example, and its sponsorship of several provincial energy corporations, is a case in point; nowhere in Canada does the banner of the private sector fly higher. Such is the paradox surrounding the proliferation of Crown corporations in Canada, particularly at the provincial level.

To put the same point in a different way, let us return to the last sentence of the Globe's editorial cited above: we should restrict the use of Crown corporations to "areas where a public presence is truly needed." Such a stance of course begs to a relevant question. How does the Globe propose to identify these areas or situations where a public presence is required? Without such indicators, it is quite possible that the rush to privatize certain Crown corporations may be either misdirected or premature.

Unless this issue can be addressed in analytical or theoretical terms, the debate is destined to seesaw back and forth in an inconclusive fashion -- between dimly perceived "necessities" and philosophical postulates that are out of focus with the relevant economic realities.

A study of the origins of the Canadian Wheat Board offers, in high definition and in "slow motion," a close-up of some of the major issues that still pervade the contemporary discussion of government enterprise. For over four decades in Canada, the debate raged on the proper organization of the wheat economy. On one side stood the advocates of the free market, who stoutly defended the operations of the Winnipeg Grain Exchange as the best of all possible systems. On the other side, a cluster of cooperative wheat pools and untold numbers of agrarian protesters looked for ways to circumvent the excesses and inequities they

assumed were present on the Exchange. Eventually they opted for a "government monopoly."

The final resolution of the debate did not emerge from a deliberate decision to adopt either the one or the other philosophical blueprint. Three unexpected economic crises which fell outside the purview of both sides of the debate, forced a resolution in favour of a Crown corporation. This occurred paradoxically, despite the existing Liberal government's express commitment to the free market for the wheat economy.

The Canadian Wheat Board proved to be efficient and responsive to changing economic conditions. Some 40 years after its creation, it continues to enjoy undiminished popularity among wheat farmers.

It would appear that some things work in practice that would never work in theory. We turn to an overview of the theoretical issues, followed by a brief historical account of the genesis of the Wheat Board.

II SOME LACUNAE IN THE THEORY OF MARKETS

Crown corporations seem, to orthodox economists, a form of deviant economic behaviour that falls short, on virtually every count, of the guaranteed perfection inherent in the operations of competitive markets.

It would be superfluous in this paper to rehearse all these classical market virtues: responsiveness to consumer demand, "efficiency," the equilibrium adjustments between supply and demand, and so on. "Meeting the market test" is taken as equivalent to the final word in economic performance. The neoclassical theory of markets appears to its adherents as universally relevant, comprehensive and theoretically unexceptionable. Disequilibrating and exogenous forces would, in principle, be absorbed and transmuted either into effects on the supply curve or on the demand curve (or both) and assure the coherence and integration of the system.

While I have no wish in this paper to tarnish such pristine credulity, a hidden issue does arise in relation to markets, although admittedly in certain exceptional cases. This is the question of <u>thresholds</u> in price movements beyond which the market institution ceases to function effectively, i.e., ceases to perform its basic function of distribution and allocation. This question may be brought under the broad heading of "discontinui-

ties" of market performance or may alternatively be discussed under the label "market failure." It is such discontinuities of "failures" at the more extended ranges of a market's performance which we offer as our main hypothesis to account for the genesis of the Crown corporation being examined here, the Canadian Wheat Board.

It should be pointed out that this discussion is not addressed to a general nor to an ideological critique of markets, but rather to the hypothesis that markets have threshold levels beyond which excessive price movements would stand in danger of disrupting the institution's regular functions. Put differently, we are exploring the implicit existence of price levels in a market, beyond which centrifugal or disequilibrating forces would disrupt the orderly allocation of the commodity in question.

The most common case is that of wartime conditions when price controls or rationing are instituted. This is designed to circumvent what might otherwise be intolerably high prices if the market were relied upon to ration goods in short supply in the normal way. While several things can be said about such a case, we wish to restrict our remarks to the common-sense recognition that market forces have their limits beyond which the range of price fluctuations would be socially intolerable.

A second case concerns the "daily limits" on price movements in certain financial or commodity markets. Treasury bond contracts on the futures market of the Chicago Board of Trade, for example, are not allowed to fluctuate more than two whole points (i.e., two thousand dollars) above or below their closing price of the previous day. Once again, there is an ad hoc recognition that unlimited price movements could trigger a panic wave of buying or selling, and disrupt the coherence of this particular market.

A related case is that the "stop-trade" order on the stock exchanges prior to some special announcement about the company in question. Similarly, official announcements by governments that have important financial implications are held back until the exchanges have closed for the day. Once again, there is an intuitive sense that markets are vulnerable to disruption beyond a certain point of stress.

These examples that have been chosen at random highlight the divergence between theory and practice in our understanding of market institutions. In theory, market institutions have unlimited flexibility and tend towards equilibrium. In practice, there is an unstated recognition that there is a threshold beyond which panic, chaos or institutional disintegration may set in. This practice has yet to find its theory.

Responsibility for these occasional or ad hoc suspensions of markets rests with governments or their regulatory agencies that retain full legal jurisdiction in this field.

Among the complex economic and political forces that permeate the history of the wheat economy, the above hypothesis, I believe, can best account for the permanent transition from a market system under the Winnipeg Grain Exchange, to the Crown corporation, i.e., the Canadian Wheat Board. We turn to a capsule economic history of the wheat economy that examines these issues. I am heavily indebted here to the pioneering work on the wheat economy by the late Professor Vernon C. Fowke.

III A BRIEF INSTITUTIONAL HISTORY OF THE WHEAT ECONOMY

The Canadian West is the child of the National Policy,[3] a mixed framework consisting of an emphasis on free enterprise for production and marketing with a regulated structure of railway rates, a protective tariff, and the Dominion Lands Policy. The latter was a free-homestead system that allocated about one-half of all the land in the Canadian West by 1928 in parcels of 160 acres.[4]

The completion of the C.P.R. led shortly thereafter to the creation of the Winnipeg Grain and Produce Exchange in 1887. It became the focal point of the entire wheat economy, the locus of price formation for all Western wheat and the depot for transhipment and sale of grain to Atlantic ports.

By 1904, an additional function was added to the Winnipeg exchange, namely a futures market. Schedules of future prices varied with the time of delivery, the quantity and grade of wheat in the contract, and some other technical features. Purchasers and sellers of these futures contracts did not themselves plan to take delivery or to export this wheat. They were largely speculators trying to benefit from the constant fluctuations of the price of wheat on world grain markets. Schedules of futures prices fluctuated in conjunction with the "spot" price for existing wheat on the Winnipeg exchange and the "world" or

Liverpool price. By the end of the First World War, the Winnipeg Grain Exchange existed side by side with a global network of grain exchanges including Chicago, Buenos Aires, and Liverpool.

Local elevators and terminal points that purchased wheat from the farmers took their lead each morning from the Winnipeg "spot price" less local transport costs.

The development of the wheat economy is marked by agrarian protest throughout its history. The focus of this protest, however, shifted slowly from local issues through gradually widening horizons to settle eventually on the "open-market" system operating through the Winnipeg exchange.

Initially, when farmers dealt with a single local outlet for their wheat, their protests were concerned with questions of inspection and arbitrary grading. Price spreads between the local and Winnipeg price (that took transport and handling costs into account) seemed to them arbitrary as well. The "take-it-or-leave-it" verdict of grain buyers such as the North West Grain Dealers' Association, led to charges of "monopoly," perhaps the single most popular protest term in the farmers' vocabulary, a surrogate for most of their woes.

That might have suggested perhaps that the farmers would become partisans of the opposite state of affairs, namely "competition,"

and therefore strong supporters of the free market for wheat. But here they confronted a second set of problems. Constantly changing market prices generated a sense of frustration and powerlessness among the farmers, particularly since their livelihood was tied to a one-crop staple economy. They attributed many of these price movements to the speculators on the futures market, who, in their eyes, were unproductive drones in the system. Their speculative profits made on wheat futures which had not even been produced seemed to come at the expense of the farmer.

Political agitation by the farmers brought, in turn, numerous federal Royal commissions and provincial inquiries that attempted to get to the bottom of these complaints, but with little success. Corrections of certain local abuses were made but these commissions generally found that on the main issue, the free market for wheat performed exactly as could be expected -- with flexibility, equity and proper allocation. The depth of feeling among the farmers was often noted with sympathy. As the Saskatchewan Elevator Commission put it in 1910, they were "impressed by the existence of a very strong feeling of dissatisfaction on the part of some farmers who cannot be regarded as incompetent in their business or as mischief makers or agitators."[5]

The Millar Commission, appointed in 1906, was typical of many which followed. It recommended fifty detailed changes to the Manitoba Grain Act and the Grain Inspection Act, largely

administrative in nature. But on the basic issue of the role of the Winnipeg Grain Exchange, the Commission concluded:

> The work of the Grain exchange in establishing and systematizing a market in Winnipeg for the handling of the crops of the West has been a great benefit to the country.... The prices at which transactions are made...are beyond doubt the full value of the grain as based on the world's market.[6]

The footloose dissatisfaction among the farmers was as persistent as it was elusive for these various commissioners. But their findings were predictable. The pre-eminent historian of the wheat economy, Vernon C. Fowke, sums up the results of these inquiries:

> Whether or not such people could suggest any remedy for the agricultural problem, they could be counted on to analyse the merits of competition and of the free enterprise system in a scholarly way and to demonstrate conclusively that such a system could not be improved upon.[7]

It is no exaggeration to state that the above verdict points to a common theme among seven Royal commissions set up by the Dominion government to investigate the grain trade between 1899 and 1939 as well as eight special committees of the House of Commons and twenty-four agricultural commissions of the three prairie provinces in roughly the same period.[8] Fowke adds: "These commissions repeatedly established the theoretical

superiority of the price system and its institutions such as the Winnipeg Grain Exchange. They contributed little to the solution of the agricultural problem."[9]

Since the impetus and direction for institutional change did not come from "above," (i.e., from the government), did it in fact come from "below" -- from the thrust of the arguments presented by the farmers and even more so from the new institutions which they initiated?

Farmers responded spontaneously to their sense of powerlessness and frustration with a growing network of counter-institutions created under their own impetus. The issue of "local monopoly" inspired new farmers' organizations in each of the three prairie provinces, beginning in the first decade of this century. The Grain Growers' Grain Company in Manitoba, the Saskatchewan Grain Growers' Association and the United Farmers of Alberta sought to counter "local monopoly" with a competing system of government-owned storage elevators to be operated as a public utility.

Such an experiment was first attempted in Manitoba but was mismanaged by the government and was short-lived. But experiments in Saskatchewan and Alberta were more successful. These were based on the principle that government funds would be used to establish an alternative elevator system, but that subsequently the system would be managed locally. The Saskatchewan

Co-operative Elevator Company was incorporated in 1911 and was emulated two years later by the Alberta Farmers Co-operative Elevator Company. Both flourished.

By 1917, the combined farmers' organizations controlled some 650 elevators in the West and provided competitive facilities for about 45 per cent of the local terminals. They also controlled about one-third of the terminal capacity at the head of the Great Lakes.[10] The farmers' objectives, as stated earlier, were limited. They were prepared to act entirely as direct participants within the existing market system and acceded to its basic premises. They merely wished to counter "monopoly" and have a direct and representative voice in the competitive process to insure that they were not being manipulated unfairly.

For the period up to 1920, Fowke sums up for the agrarian counter-movement as follows:

> They adapted themselves to the open market system, they accepted its free enterprise premises and became a respectable and orthodox part of the open market process for the marketing of grain.[11]

An important turn in the road came after 1920 when the focus of the farmers' concerns shifted to what they called "orderly marketing." This issue grew out of the seasonal nature of the wheat economy namely, the fact that three-quarters of the Canadian crop was brought to market during a period of three months after

harvesting.[12] Prices went through very marked fluctuations as a result, and provided the basis for the extensive speculation on the futures market throughout the year. The principle of "orderly marketing" meant spreading out the delivery of wheat more evenly throughout the year to moderate the price fluctuations. The chief advocate of "orderly marketing" was Aaron Shapiro who put the case as follows:

> The central problem of co-operative marketing, the central problem of the farm is to try to stop dumping by the farmers. Every farmer in the world who sells as an individual is dumping his product, and breaking his own price by the dumping process. The fundamental thing is to stop the dumping of farm products, stop individual selling, stop local selling, and organize the commodity on such a plan that you can sell a great portion of that commodity from one office on a straight merchandising plan. By merchandising we mean control of the flow of any given commodity, so that it goes to the markets of the world, wherever they are, in such times, and in such quantities that they will be absorbed at a price that is fair under current conditions. Stop dumping and substitute merchandising....[13]

As Alexander McPhail put the problem: "We must above everything else pursue a steady selling policy to eliminate the chances of speculation as much as possible in the marketing of our wheat."[14]

The farmers felt strongly that they were entitled to some assistance in this matter. Industry, after all, received protection from erratic price movements that came from abroad through the tariff; transportation received massive subsidies, and

numerous price agreements operated in other sectors of the economy.

But the farmers recognized from their past experience that there was little chance for any major government initiative that would interfere with the operations of the Winnipeg Grain Exchange. Their response instead was to bypass the Exchange altogether and create their own international marketing organization to sell to their customers abroad in "orderly" fashion. Hence the Alberta wheat pool began its activities in 1923 followed by the Saskatchewan and Manitoba pools in 1924. A joint organization, the Central Selling Agency, represented these pools abroad from 1924 until the crash of 1930.

This pooling method permitted the Agency to direct its stocks of wheat to its customers at its own pace as well as to retain these stocks to await more favourable selling conditions at the subsequent date. The individual grower had a contract with his particular pool to deliver all his crop to it regardless of other competitive offers he might receive. The contract specified the general purpose of this pooling arrangement as follows:

> "promoting, fostering and encouraging the business of growing and marketing wheat co-operatively and for eliminating speculation in wheat and for stabilizing the wheat market....[15]

The Central Selling Agency had great success between the years 1925 and 1930 and accounted for about one-half of all grain deliveries from Western farmers.[16] Returns to the farmers were divided equally for the various grades of wheat less the actual marketing expenses.

Yet the objective of "stabilizing the wheat market" necessarily eluded them. While the Agency could engage in interseasonal price stabilization, it could not control the price in the larger world wheat market. Some factions began to talk of a compulsory 100 per cent wheat pool for Canada and others of some type of world wheat agreement.

In the midst of these deliberations, the Great Depression struck the world wheat market. A decisive chain of events began to unfold. The Canadian government was drawn into a role of massive intervention from which, despite its best intentions, it could not, in the end, escape.

IV MARKET FAILURES AND THEIR CONSEQUENCES

It might appear from the foregoing discussion that the driving force for institutional change in the wheat economy was the persistent pressure of agrarian protest and the counter-institutions to which it gave rise.

The decisive events, in my view, that led to the formation of a Crown corporation were not generated internally, but were exogenous to the system. They consisted of two massive market disruptions and a third event that posed the threat of a similar disruption.

The first of these occurred towards the end of the First World War. Agencies operating on behalf of the British Royal Commission on Wheat Supplies had, in the winter and spring of 1917, purchased large numbers of wheat futures contracts with the aim of taking delivery in May and July of that year. This coincided with a poor crop year and it soon became apparent that sellers of these futures contracts would not be able to make good on their commitments. The Exchange could not resolve this "allocation" problem except by allowing the wheat price to rise to astronomical levels. Total chaos was about to ensue on the market. The Canadian government stepped in and suspended operations on the Winnipeg Grain Exchange. The government established instead the Board of Grain Supervisors with powers to fix the price at which

wheat would b ₋old and to allocate available supplies between domestic buyers and allied purchasing agencies. Chaos was averted and the new Board operated effectively from September 1, 1917 to July 21, 1919.

The Board may have ceased its operations prematurely for as soon as the Exchange reopened, a bout of intense speculative activity followed that appeared dangerous. The Government stepped in once more and created, by order-in-council, the first Canadian Wheat Board. This arrangement lasted for another year until futures trading was resumed in the normal way on August 18, 1920.

The wheat growers themselves were largely onlookers during these events that mainly concerned speculators and Purchasing Commissions. But they were able to draw some lessons of their own. Despite the conclusions of numerous Royal Commissions about the indispensability of the price system as embodied on the Exchange, it appeared that the entire system could be replaced with two measures: a governmental decree that banned futures trading entirely and a governmental monopoly on the selling of all wheat. The Wheat Board's operations were conducted efficiently and the most farmers' satisfaction without having to resort to the futures market.

This event had a marked influence on the ongoing debate in the 1920s. As the pools and the Central Selling Agency developed

their "orderly marketing" activities, an alternative position was taking hold among the farmers as a preferred choice, namely (in Fowke's assessment) "a governmental monopoly agency which would provide not an alternative to, but an exclusive replacement for, the open-market system."[17]

In the midsummer of 1929, the Agency had advanced to farmers an initial payment of $1.00 per bushel of wheat, a reasonable enough judgment when the world price was about $1.75. But the onset of the Depression brought a collapse in world wheat prices. They fell progressively lower to 50 cents a bushel by November of 1930 and fell below 40 cents per bushel (No. 1 Northern) by December of 1932.[18]

The threat of the bankruptcy of the Central Selling Agency brought a rapid response by the Dominion government. It agreed to guarantee the Agency's advances on condition that a government-appointed administrator be allowed to take over the Agency's affairs. John I. McFarland was appointed in November of 1930 and initiated a series of conferences and interim financial agreements with the provinces and the banks to stabilize the situation.

As the Depression deepened, so did the uncertainty and confusion surrounding the future organizational structure that was required, L.C. Brouillette, president of the Saskatchewan Wheat Pool, stated

before a Special Committee of the House of Commons in 1935: "Ever since the Canada Wheat Board of 1919-20 suspended operations, there has been a strong desire on the part of the vast majority of western farmers for the re-establishment of a national Wheat Board."[19]

The second Canadian Wheat Board was established in July 1935, but in truly Canadian fashion, it was to exist side by side with the Winnipeg Grain Exchange. Farmers could choose their preferred alternative, but the Dominion government did provide a full financial guarantee behind the annual fixed price for wheat set by the Board.

The Government remained ambivalent, however, and after the Turgeon Royal Commission had presented its report in May 1938, James Gardiner, the Minister of Agriculture, reiterated the Government's intention that "the government should remain out of the grain trade and our wheat should be marketed by means of the futures market system" -- a return, in short, to the status quo ante.[20]

But the pressure from delegations of Western farmers and Western premiers to retain the Wheat Board was persistent. Their opinions had been put succinctly in the brief of the three provincial pool organizations to the Turgeon Royal Commission.

> We are satisfied that the futures market does cause fluctuations not justified by the supply and demand for wheat, and this fluctuating price does not necessarily reflect world value. Indeed, it would appear to be true to say that the futures market is not a system of intelligent merchandising; it is merely an example of irresponsible mob blundering. This tendency toward instability in price, which many farmers are convinced is aggravated by speculation, is one of the most serious indictments numerous farmers level against the futures market.[21]

What finally settled the question was not the cogency of the arguments of either side nor was it the lobbying skills of the farmers' representatives. A third market failure loomed during the Second World War reminiscent of the situation in World War I. Under mutual aid agreements with its allies, Canada faced substantial obligations to supply large quantities of wheat to Britain, the U.S.S.R. and the United States. Prices began to climb steadily on the Winnipeg Exchange moving from 90 cents a bushel in March to $1.43 in September 1943. Besides the substantial drain that was involved on the Canadian treasury, the Government's anti-inflation policy was in jeopardy.[22] On September 27, 1943, the Government announced accordingly that all trading in wheat futures would cease on the Winnipeg Grain Exchange and that the Canadian Wheat Board was to have an exclusive monopoly on the selling of Canadian wheat. Trading in wheat futures was banned permanently in Canada.

The Government's Order-in-Council covering this event contains a preamble which reads (in part):

> Whereas by reason of wartime developments it is deemed necessary that the Government of Canada should exercise greater control over the marketing of Canadian wheat so that supplies of wheat and wheat flour may be made available at appropriate prices, as required for domestic use and for shipment abroad to countries in receipt of Mutual Aid....[23]

The interpretation of these events as presented here is consistent with the views of two leading authorities on the wheat economy. D.A. MacGibbon speaks of the final step in 1943 as follows:

> Although up to this time the Liberal administration had consistently displayed a theoretical bias in favour of the open market system of selling wheat, it found itself at length compelled to go the whole distance and to place sole responsibility upon the Canadian Wheat Board for disposing of Canada's wheat crop. A combination of causes had finally driven it into this position, rather than a tardy conversion to the belief that a national wheat board was the most desirable method of marketing the Canadian crop.[24]

C.F. Wilson's view is virtually identical:

> It was ironic, too, that the Liberal government had come full circle on the wheat marketing policy it had originally embarked upon to get the government out of the wheat marketing business and to terminate the wheat board. Instead of doing so, the government had now gone to the opposite extreme of creating a monopoly board. But this was not because the government had concluded that a monopoly board was the best alternative among marketing systems. Instead, it adopted this policy as a temporary, wartime expedient to resolve the extraordinary issues with which it was immediately confronted.[25]

Hence the genesis of a Crown corporation by a government that never wanted it.

* * *

Is the Canadian Wheat Board a qualitatively different institution, or have there simply been a few administrative changes made to the old "open-market" system?

The Canadian Wheat Board now has an exclusive legal monopoly on the export of wheat and takes delivery from country elevators under a quota system. A uniform set price prevails for each grade of wheat in a particular year.

An initial price is set by order-in-council before the start of a crop year and acts as a guaranteed floor price for the producer. A final payment is made after the wheat has been sold. If the Wheat Board fails to realize its initial payment to the producer, the deficit is assumed by the federal treasury. All shipments of grain abroad are administered by the Board.

The real institutional alternative to the market is given in the suspension of the voluntary, arm's-length relationship between buyer and seller, the absence of price competition, and the

absence of a "supply crowd" competing among each other to supply the wheat. All the essential ingredients of what we mean by a "market" have been replaced.

A shifting international market abroad for wheat still prevails and influences the prices set by the Board in Canada. But the administrative buffer provided by the Wheat Board between the domestic and international wheat economy, including storage facilities and the spreading of risk, has created a qualitative institution in Canada.

V CONCLUSION

The domestic market system for wheat came to an end as the result of two different forms of stress. The internal stress generated by agrarian protest and its counter-institutions often had diverse and contradictory objectives. The farmers' movement worked largely within the market system to correct its excesses and tried to bypass it only towards the end. The Government and its various commissions stood firm in defence of the market system and did not wish, in principle, to see it replaced.

The decisive shocks, however, were exogenous -- two World Wars and a Depression. The market system for wheat could not adjust to these pressures. After intermittent suspensions, the Government was forced in a crisis to abandon the market system and replace it with a Crown corporation. It is in this light that we can best understand the genesis of the Canadian Wheat Board.

It would be premature, based on this single instance, to draw general conclusions about the development of government enterprise within the Canadian market economy. Nevertheless, certain parallels are suggestive.

The external shock of the OPEC crisis, as I believe, played an important role in propelling Petro-Canada to its present prominence. It was, at the time, the sole reliable vehicle to

assure the continuity of the oil supply to Eastern Canada. The C.B.C., Air Canada, and Ontario Hydro have had their own particular histories of providing what were deemed by the community to be vital services, when the market process seemed to promise only abortive or unreliable results.

Such a rationale for government enterprise does not in itself warrant complacency. It may be useful, following many current discussions, to apply "market tests" to Crown corporations with the aim of improving efficiency, adaptability, accountability, and so on. Good housekeeping is always a virtue.

But what corresponding tests can we apply to the other side of the scale, namely, to the market itself? I have in mind the strength or fragility of a market network, its ability to adapt to stress (e.g., endogenous or exogenous "shocks"), and the threshold levels at which price movements may tend to disequilibrium rather than to equilibrium.

As suggested in this paper, a tacit or intuitive recognition of the limits of the market institution pervades, on occasion, our economic practices. For want of a theory to shape these practices, both policy-makers and producers resort extemporaneously to alternative forms of economic organization. The varied network of government enterprise, regulatory agencies and marketing boards in Canada is the result.

The rationalization of this massive public sector is contingent not only on the application of the conventional "market test," but equally on a "test of the market." The broad intent of this latter phrase should be clear from the context of this paper. But novel modes of analysis may also be required.

Perhaps the last word on this question should be given to our greatest economic historian, Harold Innis, who wrote many years ago about Canadian economic development in the following vein:

> A new country presents certain definite problems which appear to be more or less insoluble from the standpoint of the application of economic theory as worked out in the older highly industrialized countries. Economic history consequently becomes more important as a tool by which the economic theory of the old countries can be amended.[26]

Notes

1 The Globe and Mail, 18 August, 1984, p. 6.

2 Ibid.

3 I have drawn freely on an earlier paper that dealt in part with some of these issues, although it was focussed on a different problem. Cf. Abraham Rotstein, "Innis: The Alchemy of Fur and Wheat," Journal of Canadian Studies, Vol. 12, No. 5, Winter 1977, pp. 6-31.

4 Ibid., p. 30, footnote 63.

5 Report of the Elevator Commission of the Province of Saskatchewan, Regina, 1910, p. 82. Cited in Vernon C. Fowke, The National Policy and the Wheat Economy, Toronto: University of Toronto Press, 1957, p. 87. The latter volume will be cited subsequently as National Policy.

6 Report of the Royal Commission on the Grain Trade of Canada, 1906, p. 14. Cited in Vernon C. Fowke, "Royal Commissions and Canadian Agricultural Policy," The Canadian Journal of Economics and Political Science, Vol. XIV, No. 2, May 1948, p. 169.

7 Ibid., p. 173.

8 Ibid., pp. 165-66.

9 Ibid., p. 175.

10 National Policy, pp. 149, 203.

11 Ibid., p. 150.

12 Ibid., p. 223.

13 S.W. Yates, The Saskatchewan Wheat Pool, A.S. Morton (ed.), "United Farmers of Canada," Saskatoon, 1947, p. 46. Cited in National Policy, p. 224.

14 H.A. Innis (ed.), The Diary of Alexander James McPhail, Toronto: University of Toronto Press, 1940, p. 116. Cited in National Policy, p. 228.

15 National Policy, p. 219.

16 Ibid., p. 235.

17 Ibid., p. 198.

18 Ibid., pp. 248ff.

19 Ibid., p. 262.

20 Ibid., p. 271.

21 Report of the Royal Grain Inquiry Commission, 1938, p. 39. Cited in C.F. Wilson, A Century of Canadian Grain, Government Policy to 1951, Saskatoon: Western Producer Prairie Books, 1978, p. 551.

22 C.F. Wilson, op. cit., p. 786.

23 Cited in C.F. Wilson, op. cit., p. 779. My italics.

24 Cited in National Policy, p. 276.

25 C.F. Wilson, op. cit., p. 782.

26 Harold A. Innis, Essays in Canadian Economic History, Mary Q. Innis (ed.), Toronto: University of Toronto Press, 1956, p. 3.

REGULATION VERSUS PUBLIC ENTERPRISE: INSTRUMENT CHOICE IN THE CASE OF NATURAL MONOPOLY

by

John R. Baldwin
Department of Economics
Queen's University

RÉSUMÉ

Le présent document explique pourquoi le Canada, contrairement aux États-Unis, est intervenu sur les marchés des monopoles naturels pour contrôler l'activité économique, non seulement par le biais de la réglementation, mais aussi en créant des entreprises publiques. Le recours accru à ces sociétés ne relève pas d'un simple choix, mais est une conséquence non prévue de la protection insuffisante accordée à la propriété privée par la Constitution canadienne.

L'auteur soutient que, par suite de l'évolution des industries qui détiennent un monopole naturel, l'État a voulu créer une entité qui servirait d'agent pour l'établissement d'un contrat entre les consommateurs et les entreprises privées. En cherchant quel genre d'institution pourrait jouer ce rôle, le Canada et les États-Unis ont pris des voies divergentes au début, à cause de contraintes différentes imposées à leur recherche par des contextes constitutionnels n'imposant pas les mêmes limites au comportement des gouvernements.

La première section du document présente la théorie de la réglementation à partir des ouvrages traitant des échecs contractuels, dont l'un des premiers auteurs a été Williamson. Selon les arguments présentés dans cette partie, la réglementation peut être considérée comme un contrat du type décrit par

Demsetzian, mais qui ne réussira probablement pas si la nature du capital engagé dans l'industrie en question donne lieu à des attitudes opportunistes chez les parties intéressées. Dans les cas où l'opportunisme entraîne des coûts de négociation élevés pour le renouvellement des contrats, les ententes sans liens de dépendance - comme celles que conclut un organisme de réglementation au nom des consommateurs -- risquent d'être remplacées par d'autres plus complexes.

L'entreprise publique donne un caractère " interne " aux relations contractuelles entre les consommateurs et l'entité productrice, tout comme le fait d'ailleurs l'entreprise dont il est question dans l'oeuvre de Williamson, pour les transactions sans lien de dépendance entre les différents niveaux de production. Selon l'auteur du présent document, si le gouvernement ne se conforme pas à des contrats équitables du type Demsetzian, les coûts d'abrogation de ces contrats seront moindres. Dans certains cas, les pressions politiques pour la révocation des contrats sans compensation seront trop fortes, même pour des hommes politiques impartiaux qui auraient une connaissance raisonnable des conséquences à long terme. À la longue, si les diverses mesures prises par l'État ne sont soumises à aucune contrainte, le processus de réglementation sera remplacé par la création d'entreprises publiques.

La seconde section du document porte sur l'histoire de la réglementation aux États-Unis. Elle explique pourquoi les contraintes constitutionnelles ont favorisé, au départ, l'établissement d'organismes de réglementation indépendants. Dans la troisième section, l'auteur montre que le pouvoir judiciaire n'a pas restreint l'attitude opportuniste de l'État canadien, et il examine la création d'entreprises publiques dans deux secteurs : les chemins de fer et les services d'électricité en Ontario.

Pour conclure, l'auteur souligne l'omniprésence du problème examiné. À ses yeux, il ne faut pas considérer que les cas de danger moral décrits dans les deux exemples canadiens sont inhabituels. Si l'État ne peut résoudre le problème de l'échec des transactions, relié au risque de danger moral qui caractérise l'activité gouvernementale en général, il n'a pas d'autre choix que de recourir aux entreprises publiques comme instruments de sa politique.

ABSTRACT

This paper examines the reason that Canada, in contrast to the United States, has chosen to intervene in natural monopoly markets in order to control economic activity not only by using regulation but also by establishing public enterprise. It explains the greater use of public enterprise not as a matter of choice but as an unplanned consequence of a lack of protection afforded private property in the Canadian constitution.

The paper argues that, as industries characterized as being natural monopolies have evolved, the state sought to find an institution which would act as the agent to draw up a contract between consumers and privately-owned firms. In experimenting with institutions to effect these contracts, Canada and the United States initially diverged because of different constraints imposed upon the search process -- constraints which emerged because of constitutional environments which differed in terms of the bounds placed upon government behaviour.

The first section of the paper sets out the theory of regulation in the context of the contractual failure literature pioneered by Williamson. It argues that regulation can be viewed as a Demsetzian-like contract, but one that is likely to fail if opportunism on the part of the parties concerned develops because of the nature of the capital involved in this industry. Where

opportunism leads to high bargaining costs during recontracting exercises, arms'-length contracts such as those a regulatory agency enters into on behalf of consumers are likely to be supplanted with more complex forms of contract.

Public enterprise serves to internalize the contract between consumers and the production entity much as the firm in Williamson's work internalizes arms'-length transactions between separate stages in the production process. The paper argues that when the government cannot be found to abide by fairly written Demsetzian-type contracts, the cost of abrogating such contracts will be less. In certain situations, political pressures to abrogate contracts without compensation will be too great for even fairminded politicians who are reasonably cognizant of the long-run consequences of their actions. Over time, if constraints on the actions of the state do not emerge, the regulatory process will be supplanted by the creation of public enterprise.

The second section of the paper develops the history of regulation in the United States, showing how constitutional constraints were a prerequisite for the development of the independent regulatory agency. The third section shows how opportunistic behaviour on the part of the Canadian state was not constrained by the judiciary and examines the creation of public enterprise in two sectors - the railways and in the Ontario electrical utility industry.

The conclusion of the paper emphasizes the ubiquitous nature of the problem. It argues that the examples of moral hazard outlined in the two Canadian examples chosen should not be regarded as unusual. If the state cannot solve the transactions failure problem that is associated with the moral hazard problem attendant with government activity in general, it has no choice but to use public enterprises as the instrument of government policy.

A) INTRODUCTION

Scholarly economic analysis in the area of public enterprise has generally been directed at an evaluation of the "economic" efficiency of these firms.[1] More recently, a literature has developed which attempts to analyse the reason for instrument choice -- why public enterprise might be chosen even if it were less efficient in terms of its use of resources.[2]

Together these two strands in the literature can too readily degenerate into an uninteresting clash of ideology -- with those who emphasize "economic" efficiency decrying the use of this instrument and those who take a broader view of efficiency arguing that the very use of public enterprise demonstrates its superior ability to meet important public goals. The debate over the efficacy of public enterprise then shifts to the desirability of these public goals. Focusing the debate, however, at this level leaves a number of important issues unresolved. These are issues that must be addressed before debates on privatization and its desirability can be concluded in a satisfactory fashion.

The instrument choice literature is ultimately the avenue by which our understanding of the adaptation of different institutions will be improved. But it is important not to turn it into a deterministic rationalization of the status quo. Elsewhere, I have argued that the behaviour of regulatory agencies and public

enterprise can be analysed; using a model that postulates each of these is trying to reach a multi-faceted objective but is constrained by certain exogenous factors.[3] I argue that exhorting institutions to change their behaviour or advocating the adoption of a new institution is going to have little impact if the objective function and the relevant constraints are or remain the same. It is a change in the nature of the constraints that might affect behaviour -- though those constraints may be beyond the policy-maker in some situations.

This paper uses the same format to address the reason for the choice of public enterprise, as opposed to an alternate form regulation, in the one area of public concern, the control of natural monopoly. While directed at this area in order to bring certain examples to bear on the argument, the point being made is more general. The form of intervention by the state depends upon the nature of its objectives and the constraints that restrain its behaviour.

Regulation and public enterprise as instruments of public policy differ substantially in terms of their characteristics. Regulation generally leaves private ownership intact and establishes an "independent" regulatory agency to mediate the outcome of certain policy outcomes -- such as the price level. The regulatory process then has the advantage of leaving the organization of production in the private domain with its attendant efficiency

advantages. But the regulatory process can be long and involved compared to the potential for direct control inherent in public enterprise. Moreover, the handling of subsidies for specific services is potentially much more easily audited when government enterprise is used. If the public enterprise is also given a monopoly, the franchise competition phenomenon, which is inherent in a regulated situation where there are several private parties competing for franchises when entry is restricted, can be avoided or reduced. Many of these advantages of a public enterprise over regulation can be subsumed under the broad rubric of the avoidance of "contractual" difficulties.

It may therefore be argued that Canada chose public enterprise in a number of areas because our taste is greater for specific objectives that are best met by public enterprise. If specific policy goals were more important, such as those that required direct subsidies, then public enterprise may simply have been chosen because it is the superior instrument in these circumstances.

While this may provide a rationale for the use of public enterprise rather than regulation in some instances, it is not adopted here. We do focus on contractual problems -- but problems that, if not solved, preclude any choice of the sort discussed previously. Regulation is a viable alernative only if the state can bind itself to a fair contract. While contractural problems

may develop because of the state's inability to monitor private activity, we argue that an equally important problem that has received inadequate attention lies in the behaviour that the state itself occasionally exhibits. Where the state controls the judicial and police apparatus, it has much greater potential for abrogating fairly made contracts than do private parties. Only when some constraints are imposed upon the state can the relative desirability of regulation as opposed to public enterprise be considered.

In this paper, we are interested in the nature of the effect that different constraints on the state's behaviour, emanating from different constitutions in Canada and the United States, had an instrument choice. It is argued that in Canada, public enterprise was chosen in a number of key instances because of the difference in the constraints placed on the political process during its search for the optimal institution to regulate natural monopolies.

While the emphasis contained herein may appear somewhat different from that contained in the fledgling literature on instrument choice that treats the latter as a rational matching of institutions to objectives on the basis of effectiveness, the methodological framework is not. The paper argues that, as industries characterized as being natural monopolies have evolved, the state sought to find an institution which would act as the

agent to draw up a contract between consumers and privately owned firms. In experimenting with alternate institutions, Canada and the United States initially diverged because of different constraints imposed upon the search process -- constraints which emerged because of constitutional environments which differed in terms of the bounds placed upon government behaviour. Thus the choice of instrument is set within the context of an objective function and a set of constraints that affect the way in which the goal can be attained. The difference, as emphasized, lies in our analysis of the importance of there being a constitutional constraint on the exercise of what we call opportunistic behaviour of the state -- the abrogation of fairly set contracts without due compensation.

The argument contained in the following sections can be succinctly summarized. Where the government cannot be bound to abide by fairly written contracts, the cost of abrogating such contracts will be less. In certain situations, political pressures to abrogate contracts without compensation can be too great for even fair-minded politicians who are reasonably cognizant of the long-run consequences of their actions. When this occurs, the regulatory process cannot be sustained and the contractual problem will be "internalized" via the creation of public enterprise. These overriding political pressures will not arise in every situation, and in some instances, they may be resisted. But, over time, if constraints on the actions of the

state do not emerge, the regulatory process will be supplanted by the creation of public enterprise in those sectors where these contractual difficulties are greatest.

B) INSTRUMENT CHOICE AND INTERVENTION IN NATURAL MONOPOLY MARKETS

1) The Need for State Intervention

Before the issue of optimal instrument choice is discussed, the reason for government intervention in natural monopoly markets needs to be developed. Standard expositions in this area are inadequate. They concentrate on the impossibility of competition because of a number of problems, whereas the appropriate answer lies in the likelihood of contractual failure because of the peculiar nature of the transactions and the capital involved in natural monopoly markets. Once the nature of the contractual failure is recognized, the question of optimal instrument choice can be addressed.

The conventional reason given for government intervention in a natural monopoly situation is that regulation is required to protect consumers in situations where economies of scale lead to natural monopoly. This view has been expressed by two disparate groups. Those who find a rationale for political activity based on normative microeconomic theory have stressed that regulation should be associated with the presence of natural monopoly.[4] In contrast, rent-seeking theories of regulation have stressed regulation to be the result of the interaction of demand and supply for government activity. In the presence of natural

monopolies, it is consumers who are making the request for protection from exploitation and who might be expected to benefit from regulation.

Neither of these arguments explaining government intervention in natural monopoly markets is adequate. Demsetz[5] has noted that intervention per se is not needed since an ex ante contract between consumers and the monopoly producer could avoid the deadweight loss associated with monopolistic pricing. Examples of such contracts can be cited -- especially where the number of consumers is relatively small. For example, there are considerable economies in providing central collecting facilities at the well-head in the crude oil and natural gas industry. Producers invite bids from companies for such facilities and assess one another lump-sum fees to cover fixed costs and then charge a unit price to cover marginal costs. Standard regulation by the state is not required.

Intervention, where it does develop, might still be explained as the result of a transaction failure. It could be argued that, in some cases, the number of consumers who face natural monopolists -- for example, the electrical utilities and telephone companies -- is too large to overcome the organizational difficulties required to devise the required Demsetz-type contract.

But this modification of the conventional view is not fully convincing. While large numbers of parties to one side of a contract -- in this case, consumers -- may make the contractual process more costly, it does not require regulation as it has developed in North America, where the state acts as the agent for consumers. Private parties fulfill the agent role elsewhere where there are large numbers of consumers. Department stores offer their services as an intermediary between consumers on one side and what are often a small number of producers in some product lines. Buying clubs are another example of a private agent acting on behalf of a large number of consumers. In the case of an electrical generating plant that is subject to increasing returns to scale, local electric utility distributors often fulfill the function of an agent and are privately owned in many U.S. jurisdictions. Thus the large-numbers problem only gives rise to the need for an agent -- not necessarily the public agent with the specific characteristics of North American regulatory agencies.

Notwithstanding the inadequacy of the large-numbers explanation of regulation, pursuit of the reasons for transactions failures focuses on the relevant issue -- the problem of writing a contract between consumers and the natural monopoly. While there are no doubt difficulties associated with organizing a large number of consumers, this is not the only reason for transactions failures. Concentrating on numbers <u>per se</u> ignores other important

characteristics associated with what have become classified as natural monopolies. These characteristics are equally important contributors to contractual failure. When the nature of these characteristics is recognized, a more complete theory of regulation emerges.

The transactions-failure literature, pioneered by Williamson, specifies the characteristics that lead to problems when independent parties contract one with another on an arm's-length basis through market transactions. When such problems arise, it is argued that market failure develops and some method of internalizing the transactions generally emerges -- via a more complex form of contract.

Williamson argues that in the face of uncertainty about future events and because of imperfect knowledge on the part of decision-makers, there will be a general need to revise the initial terms of most contracts. Man is sufficiently imperfect and time is too costly to provide for all contingencies in any transaction. As a result, recontracting will be required. Recontracting imposes costs that are greater where conditions facilitate what Williamson has termed "opportunism." Opportunism is the use of misrepresentation which could, but does not necessarily, involve dishonest behaviour.

Opportunistic behaviour is possible and therefore most deleterious where bargaining takes place in a small-numbers situation; that is, where so few alternative parties exist that the participants in the bargaining process will continue to bargain one with another even though opportunistic behaviour, if it emerges, will increase the costs of the transactions process. In large-numbers bargaining situations, opportunism will be attenuated since either party to the recontracting process may turn to others who have not exhibited the type of opportunistic behaviour that leads to recontracting difficulties.

It is important to note that even though the initial contract may have been forged in an environment characterized by large numbers, where neither party could gain by opportunistic behaviour, the recontracting process may take place in a small-numbers bargaining context. There are two characteristics of an industry that may turn a large-numbers into a small-numbers bargaining situation. These characteristics are asset specificity and asset longevity. Asset specificity occurs when the dedication of capital to a specific use results in the value of that capital in its next best use being considerably reduced below the original value. For example, commitment of an airplane to one route does not result in a low scrap value for that plane; capital equipment in this industry can readily be switched to another route. That is not the case for the electrical utility industry. Once capital has been committed to one use or one location, its value is

minimal, should it not continue in that use. If a seller of electricity dedicates considerable assets to the provision of electrical service in a particular municipality, the nature of the fixed capital equipment means that the producer effectively becomes a hostage to consumers during any recontracting process. Similarly, a commitment by a consumer may place him in the same exposed bargaining position.

The second characteristic that exacerbates the cost of opportunism in a small-numbers situation is asset longevity. If the use-specific or location-specific capital has a life that is short relative to the recontracting period, then opportunistic behaviour on the part of consumers cannot impose a cost on the seller. In this case, while capital may be specific, it has no inherent captive value.

The transactions-failure framework serves to explain why transactions take place, not through market or external relationships, but via internal or firm-like arrangements. When asset specificity and longevity create recontracting difficulties, a more complex contract will evolve to reduce the costs of adapting to uncertainty. One such complex contract involves internalization of the transaction within a firm. The transactions-failure literature has provided a rich set of implications for questions pertaining to the nature of a firm, the reason for various institutions in labour markets, and the extent to which vertical

integration is a response to transactions failures.[6] The same literature serves an important role in explaining the reason for regulation in the presence of natural monopolies.

2) Transactions Failure and Regulation

The transactions-failure framework can be applied directly to a theory of regulation for such industries as electrical utilities and telephone companies. There is considerable asset specificity as well as asset longevity in both cases. Whereas there might have been several companies looking initially for franchises, the characteristics of the capital stock dictate that the initial large-numbers situation will turn into a small-numbers bargaining situation during any recontracting exercise.

Since the industries most commonly referred to as natural monopolies are characterized by small-numbers bargaining situations during recontracting exercises and relatively long-lived asset specific capital that makes opportunistic behaviour more costly during recontracting, the transactions-failure literature suggests a more complex contract is required to deal with the problem.

Two alternatives are available. When contractual failure develops between two intermediate stages in the production process, internalization via the merging of autonomous contractors into a single firm is one option. Its counterpart here, at the

final stage of the production process, at the interface between the producer and the final consumer, is public enterprise where the consumer ultimately owns the production facilities. The other alternative discussed by the transactions-failure literature is some form of complex contract that provides for the arbitration of unforeseen contingencies or which attempts to specify in advance how the consequences of any change will be apportioned. Alternatives to public enterprise will be sought if the costs of internal organization are particularly high, or conversely, if the benefits of decentralized decision-making are high enough to warrant greater effort be spent on the nature of the contract -- in order to reduce some of the recontracting problems. The latter, of course, is feasible where the nature of the events that will reduce recontracting is understood, even though their occurrence remains unpredictable, and where the terms that must be renegotiated are relatively simple.

The regulatory agency can be regarded as the alternate institution to public enterprise that has evolved to negotiate the terms of a complex form of contract between consumers and producers. Not surprisingly, regulatory agencies developed the same characteristics that the transactions literature lists as essential to the efficacy of internal organization.[7] Internal organization has to develop internal auditing systems. The regulatory agency has developed expert staff to detect misrepresentations by consumers or producers. Internal organizations must develop effective

mediation procedures. The regulatory agency has developed elaborate rules for arbitration. Finally, internal organization must attenuate the ability of parties to internal exchange within the firm to appropriate gains from opportunistic behaviour. But here the prerequisite for successful operation has been imposed upon the process from outside -- by judicial authorities.

Regulators are both agents and arbiters. They are an agent of the state which is called upon both to set the terms of the contract between consumers and producers and to adjudicate disputes that may arise. The use of the political process as an agent to referee transactions between consumers and natural monopolies creates a particularly difficult problem. Any organ of the state is, quite appropriately, susceptible to political pressure. Unfortunately, political pressure from consumers may develop to exploit producers. Opportunism, it must be recalled, is not just a problem arising from the deceitful use of information. It also includes false representations made by those who fervently believe in their own positions. The political process, associated as it is with some ideologies that are antagonistic to private property, is probably more susceptible to opportunistic behaviour than commercial negotiations.

The concept of opportunism that is central to the transactions-failure literature is not always precise. For what might be described by some as a hard bargain, well-struck could be

interpreted by others as ill-gotten gains that arise from misrepresentation. There is generally no autonomous standard that can be used to adjudicate the fairness of the division of rewards. But in the case that we are dealing with here, this problem is reduced. For there is a relatively well-defined standard by which to judge opportunism. Opportunism on the part of the state is defined as expropriation without appropriate recompense. The opportunity cost of foregone earnings is the standard used to decide upon appropriate recompense.

While regulatory agencies are given a semi-judicial, independent status to reduce the impact of opportunistic influences emanating from the political systems, they are not isolated from all political pressure. Bounds must be placed upon the agency's ability to act in an opportunistic fashion during the recontracting process. There must be a check or balance that permits the agency to resist the worst type of opportunistic behaviour emanating from the political process -- the tendency to expropriate producer capital. Therefore, regulatory agencies have been constrained either under common law or through constitutional provisions that guarantee the sanctity of property.

Where such laws do not exist, where property rights are not enshrined in a constitution or protected by tradition, then a substitute institution that internalizes transactions in a naturally monopolistic industry should develop. A primary

substitute for regulation is the public provision of goods and services. If consumers attempt to exploit private natural monopolies and if they fail to create a legal setting that prevents such exploitation, then exploitation can be avoided essentially by making consumers owners of the enterprise through nationalization. In this situation, attempts to exploit capital will be less successful because consumers, by doing so, can only exploit themselves.[8]

In conclusion, the process of regulation in the case of natural monopoly can be seen to follow logically from the existence of economies of scale and the need for consumers to contract with monopolists so as not to permit the exploitation of the former by the latter. The existence of a large number of consumers requires the use of an intermediary to act as agent to negotiate the contract. However, because of asset specificity and asset longevity in the industries concerned, the recontracting process can be extremely costly when opportunistic behaviour develops on the part of consumers. Since there is a particular tendency for the state, acting as agent, to engage in opportunistic behaviour if not constrained from doing so, the type of intervention will be in part determined by the degree to which opportunistic behaviour on the part of the state is constrained. If it is not, there will be less likelihood that the regulatory process will last -- since a necessary condition for successful recontracting will not exist.

C) THE EVOLUTION OF REGULATION IN THE UNITED STATES

While regulatory agencies can be viewed as the form of institution that has been used to draft the terms of a complex form of contract needed to resolve a particular form of transactions failure, they only emerged after a process of experimentation. The industries which have come to be classified as natural monopolies and which spawned the modern regulatory process -- electrical utilities, street railways, telephones, and gas utilities -- began to evolve in the late 1880s but grew rapidly after the turn of the century.[9] While the Interstate Commerce Commission was established in 1887, it did not provide the definitive model for the regulatory process for a number of reasons -- probably because it was called upon not so much to protect the consumer from exploitation as to moderate the extent of inter-firm rivalry within the railway industry.[10]

Regulation as an institution has evolved slowly in the United States. In the period prior to 1870, the first tentative steps taken to regulate the utility sector were unsuccessful. Judicial oversight was tried and discarded. English common law required industries with "public service" characteristics to render adequate service at reasonable prices. But this form of protection proved inadequate because the judiciary, as normally constituted, does not have the characteristics required for the role of regulatory agent. The courts are meant to be arbiters of

the terms of contract, not the originators of those contracts. They are not constituted to handle the ongoing supervision of a contract that is necessary. Their procedures are too costly and too time-consuming. Finally, because of their wide-ranging responsibilities, they lack the expertise that is necessary to resolve quickly and inexpensively the ongoing issues that the regulatory agent must renegotiate. Judicial protection, via the common-law obligation to render adequate service at reasonable prices, proved inadequate.

Much the same reasons can be adduced for the failure of the earliest attempts at legislative control. Legislatures did offer a form of control insofar as they incorporated local utilities through special acts. These acts then formed the terms of the contract between the public and the utility. But this was a cumbersome process that did not allow for ready amendment of the terms of the franchise when renegotiation was required. Legislatures with their infrequent sessions and their other responsibilities could not give adequate consideration to changes in the terms of the act of incorporation as new conditions warranted.[11] Just as important, direct legislative control was observed to lead to political corruption. Barnes noted it

> "...led to so much log-rolling and political corruption in an effort to serve special privileges and advantages from the legislature that it finally became customary for the legislatures to pass self-denying statutes forswearing the special incorporation of businesses."[12]

This is the control problem arising from opportunism. As argued earlier, where the opportunity for corruption is not constrained either voluntarily or via judicial controls, a public regulatory agent must fail.

Gradually, a system of municipal regulation evolved to handle the contractual problem. Because the electrical, telephone, and street railways required use of public streets, municipalities came to exert control over the issuance of franchises as a result of their power to police the public streets. Yet considerable adaptation was still required before society managed to create the agent needed for the regulatory function. First, experimentation was required as to the type of contract that would best suit the conditions inherent in the industries concerned. Second, the legal system had to constrain the opportunism that can develop in small-numbers bargaining situations where the political process is involved. Without this constraint, the regulatory commission could not be relied upon to offer an effective alternative to the other internalization alternative -- that of state ownership.

The earliest municipal franchise very much resembled a simple Demsetz-type contract between producers and consumers. In return for the privilege of a franchise (not necessarily exclusive), the utility entered a contract with the municipality that often specified both maximum rates and service standards.[13] The terms of the contract also generally covered the remuneration to be

received by the municipality. In the case of California, franchises were sold to the highest bidder. Elsewhere, in addition to cash payments, various forms of revenue in kind were demanded. Street railways were asked to provide service to city employees, street paving, and street cleaning; telephone and water companies to provide free service to certain public buildings; and electric companies to provide free street lighting.[14]

Unfortunately, these contracts were not sufficiently flexible to handle transactions problems that merged during renegotiations. Changing technology that was not foreseen by the public authorities often rendered the maximum rates or the service standards meaningless and gave rise to public demands for a renegotiation. It was not only consumers that demanded renegotiation. When inflation increased costs, utilities found themselves without sufficient revenues to supply the contracted service.[15]

The institutional framework prevailing at the time proved unable to deal with the renegotiations in an efficacious manner for two main reasons. Opportunism on the part of political authorities led to scandals for which the utilities were often blamed.[16] Assignment of the blame for the behaviour that was evidenced is not at issue here. It is sufficient to note the general perception that the political process could not handle the renegotiation. One observer wrote:

> "... taking the utility question out of local politics is likely to result in higher standards of conduct on the part of municipal and utility officials, for when utilities were charged with political corruption, it was usually forced upon them by a necessity of negotiating franchise renewals."[17]

It has been argued that, for a political body to function as a regulatory agent, its tendencies towards opportunism must first be restrained. The judicial system in the United States eventually come to define a set of bounds upon regulatory agencies' behaviour that accomplished this.

The first problem the courts had to resolve was the extent to which a franchise was both a contract and one that could be renegotiated. Early court rulings defined a franchise as a contract subject to judicial review and therefore protected private parties from state laws that might impair the obligations of contracts, as such franchises could not be arbitrarily and capriciously revoked by municipal or state agencies. But the courts also ruled that franchises could not be given that voided the basic police powers of the state. It was this power to police in the interests of the health and safety of its citizens that was used to justify regulation. The Supreme Court came to recognize franchises as amounting to a contract if the state constitution specifically gave to the public body awarding the franchise the power to make rate contracts and if the length of time during which the power of rate masking was suspended was reasonable.[18]

This meant that states that included provisions in their constitutions that restricted the extent and the terms of locally granted franchises could provide a means by which municipalities could enter into a contract whose terms could be renegotiated. Many states did so and focused on the length of contract to be permitted -- typically stipulating an upper limit.[19] But the process of more fully defining the limits possessed by municipalities was time-consuming and thus the new institutional framework that allowed recontracting was somewhat slow to emerge.

More critical were the courts' rulings that defined the actions of regulatory bodies that would not be tolerated during the renegotiation process. Two clauses in the U.S. constitution guarantee property rights. The fifth amendment states: "No person shall... be deprived of life, liberty, or property without due process of law; nor shall private property be taken for public use, without just compensation." While this amendment bound the federal government, a similar amendment, passed in 1868, bound state governments. Between 1870 and 1890, these clauses were applied by the courts in such a way as to provide the legal constraints on political opportunism necessary for regulation to operate.

The legal interpretations necessary for successful regulation to evolve were relatively slow in emerging. Even in the Munn v. Illinois case in 1876, which has been widely quoted as providing a

watershed with regards to the state's ability to use the police powers to regulate, the Supreme Court was unwilling to review the workings of the regulatory process. The Court ruled that as long as the legislature had set a maximum price, the courts should not review what was reasonable. In an 1873 ruling,[20] the courts rejected the contention that property rights were affected by regulation and as an obiter dictum observed that the fourteenth amendment was aimed at protecting the rights of Negroes, and an exceptionally strong case would have to be made if this amendment was to be applied elsewhere.[21] However, this position was to change. In the 1880s, the Supreme Court indicated that it was likely to consider the reasonableness of rate regulation. In 1886, as obiter the Court observed that the power to regulate, which it had approved, was not a power to confiscate without just compensation and without due process.[22] In 1894, the Supreme Court assumed the right of judicial review of the decisions of regulators by setting aside a regulatory commission order on the grounds that the rate fixed was too low to afford a reasonable rate of return.[23]

With the Court's acceptance of its review role with respect to property rights, it enunciated the principles to be used to evaluate whether capital was being duly remunerated. In Smyth v. Ames (1898),[24] the Supreme Court first described in some detail the principles that were to govern its decisions.[25] The regulated company, it ruled, was entitled to a "fair return upon the value of that which it employs for the public convenience."[26]

In ruling on the fair rate of return,[27] the Court established four basic points.[28] First, as early as 1894,[29] it recognized the right of a utility to earn a rate that allowed it to attract new capital. Second, it recognized the rate should be tailored to the needs of the specific business.[30] In particular, it ruled that the rate should reflect the risk of the business. Third, it ruled that the rate should not reflect that earned in "highly profitable enterprises or speculative enterprises."[31] Fourth, it stipulated that the appropriate rate could vary -- that it was not to be based on historical conditions but that it had to be based on present, and even future, business conditions.[32]

In this way, the legal system provided a set of flexible guidelines for regulatory commissions. These guidelines meant that no one rate could be defined in all circumstances and, therefore, allowed commissions to vary rates over time as inflation and business conditions affected rates. In the 1920s, the Court was observed to increase the general rate it allowed from some 6 to about 8 per cent. By the 1930s, this was reduced to around 6 per cent.[33] While regulatory commissions were therefore constrained from engaging in opportunistic behaviour that confiscated property, the legal system did not act so as to obviate the necessity of efficiency. Inefficient management could be penalized;[34] more importantly, the Court ruled that the inability of a company to obtain customers because of competition did not justify increased prices.[35]

It was in its interpretation of the fair value of the rate base that the Court faced more contentious issues. Here its rulings evolved in a sensible fashion. In the first cases brought before the Court, consumers argued that fair value of the rate base should not be construed as the capitalization value because of stock watering schemes. They also argued that it should not be taken as reported construction costs because construction companies were said to have funneled large unproductive expenditures into the hands of promoters. Consumers argued for a concept more akin to the economist's concept of opportunity cost -- the reproduction cost of the capital or the present market value of the property. While the U.S. Supreme Court refused to specify a formula in detail, its decisions favoured the present market value -- at least in the earlier period -- if only because it rejected the utilities' arguments that the base should be their original cost or their investment.[36]

Between 1900 and 1920, the Court continued to stress the economically meaningful concept, and increasingly focused on reproduction costs rather than original cost. In 1909,[37] the Court noted that rising prices should be considered in determining present value. The difference between historical or original costs became even more important between 1914 and 1929 as the price level increased dramatically. In 1922, the Court affirmed that present prices should be used for reproduction costs,[38] and in 1926,[39] the Court went so far as to argue that future prices

which had to be considered. These decisions set reproduction costs as the basis on which regulatory commissions functioned over much of this period.[40] One observer noted that the majority of commissions adhered to these fair value standards and were "deferential to the precedents established by the federal courts."[41]

Throughout this period, the Court refused to be bound by a specific formula, thereby providing itself with flexibility required for changing circumstances. Just as rising prices up to 1929 required a modification of its initial rule, declining prices in the 1930s required another modification. The Court shifted to an "end-result" criterion. In a landmark decision,[42] the Supreme Court rejected a lower court's decision that used a slavish devotion to the reproduction concept to argue that rates were confiscatory. The Supreme Court ruled that the ability of the company in question to pay reasonable dividends and to operate successfully had not been impaired and thus rates were not confiscatory. Other decisions at this time also rejected reproduction costs based on extrapolating historical cost using price indexes.[43] This freed regulatory commissions from rigidly following a formula determining reproduction costs. With the Hope Decision of 1944,[44] the Court stressed tht regulatory commissions had more responsibility in determining the rate base than previously, although the Court still had the right to review the reasonableness of the resulting decisions.[45] In effect, the Court

recognized that the reproduction cost formula it initially used had become increasingly inadequate over time as price levels fluctuated and technology changed. While it may have been possible to use a simple reproduction cost formula early in the century when utilities were relatively young, this was impractical and too imprecise a method by the 1930s.

While numerous refinements in the bounds placed upon regulatory agencies were made by the courts after 1900, the basic package was established by its "fair return" on "fair value" standards which emerged by the first decade of the twentieth century. It is not coincidental that the modern regulatory system then emerged quite rapidly.

Wisconsin and New York led the way with the passage of regulatory statutes in 1907 that were widely emulated.[46] The Wisconsin legislation converted existing franchises to "indeterminate" permits, thereby resolving the length of contract problem. While buyouts were permissible, the state commission was given the power to set the purchase price -- being of course constrained by then as to what fair value was by the Supreme Court's rulings.[47] Wisconsin gave the state commission control not only over rates but also over-the-rate base, since capitalization and the issuance of securities also fell within the purview of the state commission. With the Supreme Court rulings on fair return on fair value already established, the state commissions could be expected to perform their agency task with relative efficiency.

D) THE NATIONALIZATION PROCESS IN CANADA: Examples of Transactions Failure

1) The Railway System

a) Introduction

There is a striking difference between the manner in which Canada and the United States have chosen to regulate industry. Canada, in contrast to the United States, has adopted public enterprise more often. The railway, electric utility, telephone and airline sectors all have Crown corporations either at the federal or the provincial level -- often with a regulatory commission imposed as well. Previously, it was argued that the choice of public enterprise as a government instrument may often be associated with contractual transactions failure. In this section, we examine the extent to which this is true of the nationalization of Canadian railways that occurred during World War I.

Nationalization is likely to result, the first section argues, when a particularly difficult set of contracts -- those between the state and private enterprise -- cannot be written. Transactions failure arises where uncertainty, bounded rationality, opportunism, and confiscation of investments mean arm's-length transactions cannot be relied upon. Nationalization occurs when

private property is not protected from exploitation by the state, since the internationalization solution to transactions failure in this case necessarily involves the linking of the consumer and the enterprise through state ownership rather than through any other contractual form.

Nationalization need not involve expropriation. But when part of the capital of the public enterprise can be acquired for less than its value, myopic politicians will have a greater incentive to take over the enterprise, especially when other pressures seem to increase the importance of national goals. It should be noted that venality is not a prerequisite to nationalization; highly laudable national goals may be present. The Canadian government's desire to unify the country via its railway system is well known. Our argument is that where changed circumstances require contract renegotiation, in some instances opportunism will arise and arm's-length transactions will fail. When the state is involved, as it is with the regulatory process, opportunism may be cloaked in political ideals -- ideals which are salutary when taken by themselves. But the ideals may lead to an opportunism that precludes anything other than public enterprise. Thus, nationalization will be correlated with expropriation and contractual failure; though the former need not always accompany the latter if common law or tradition constrains the state's ability to confiscate.

b) The Contractual Process and Transactions Failure

The history of government involvement in the Canadian railway industry is replete with contractual difficulties of two types. The first involved those contracts between governments and railways for construction purposes. The second involved regulation of the railways and impacted upon the ability of the railways to fulfill the terms of the first. Because of imperfect foresight, contractual difficulties that arose in the first case impinged on the second and contributed to the regulatory failure that occurred. But just as important, the contractual process foundered on the moral hazard problem, in that the ability of the private sector to fulfill the terms of the construction contracts came to depend upon the government's control of the regulatory process -- a control which was exercised to the detriment of private capital's ability to fulfill its contractual obligations in the first case.

The Canadian government involved itself with the construction of three major transcontinental systems. With Confederation came the government-constructed and operated Intercolonial Railway that by 1876 linked the Maritimes and Quebec. At the same time, the Canadian Pacific was begun under private auspices but with government support and completed between Montreal and Vancouver in 1885. The third line, the Canadian Northern, was constructed between 1896 and 1915 on a piecemeal basis with intermittent

government support. The fourth, the National Transcontinental, was a partnership between the Canadian government and a well-established Ontario railway -- the Grand Trunk. Under the terms of the contract, the Grand Trunk was to build the western section -- the Grand Trunk Pacific -- while the Canadian government would construct the eastern section which would then be rented by the Grand Trunk and operated as one system along with the Grand Trunk Pacific. Started in 1905, the National Transcontinental too was finished during World War I.

The Canadian federal government encouraged the three major transcontinental railways by subsidizing construction. These were done with contracts that specified the subsidy, usually per mile, and often gave control over the location and other aspects such as grade to the government. Control over the route was specified so as to attenuate the opportunistic behaviour that resulted when early contractors uneccessarily extended lines to increase receipts.

The nature of the contract with regards to both the form and the amount of subsidy adopted by the government changed over time in an important way. In the case of the Canadian Pacific, the government used cash subsidies and land grants extensively during the 1870s. The Canadian Northern was able to complete a transcontinental line privately with a piecemeal construction and purchase program, through cash subsidies from federal, provincial,

and municipal governments, land grants,[48] and the sale of bonds, some of which were guaranteed by the Dominion government.[49] With the National Transcontinental agreement in 1903 between the Canadian government and the Grand Trunk, only bond guarantees were used to provide government support for the Grand Trunk Pacific.[50] Cash subsidies and land grants were conspicuous by their absence.

This created substantial difficulties for the newly emerging regulatory process. For, rates that covered the full costs of the new transcontinental systems would leave the CPR with large profits. The intensity of public antipathy to the CPR meant that a rate structure that appeared to favour the CPR was unacceptable.[51] On the other hand, differential rates that reflected the varying degree of capital subsidies were equally unacceptable in light of the intense pressure that was placed upon the regulatory commission to equalize rates for different western points.[52]

There was considerable lack of foresight exhibited by these contracts. However, the widespread existence of uncertainty and the bounded rationality of contracting agents means all contingencies cannot be specified in advance. It is the manner in which recontracting takes place when required that sheds light on the reasons for transactions failure.

Of those flaws in the contractual process, perhaps the most fatal was that associated with moral hazard. Moral hazard problems arise when parties to a contract can, by their behaviour, change the division of benefits from those originally agreed. The moral hazard that arose in the railway industry stemmed from the government's ability, via the regulatory process, to affect the degree to which the privately owned railways might fulfill their part of the construction contract -- to build and operate the railway without continuous recourse to the public's purse.

Canada, in contrast to the United States, did not place the same judicial restrictions upon the regulatory process. Prior to 1886, regulation of rates was limited to the stipulation of maxima in charters. In 1886, the Railway Committee of the Privy Council -- a subcommittee of the Cabinet -- was entrusted with the control of rates. It was not until 1903 that the Board of Railway Commissioners was established as an independent railway tribunal similar to the American ICC.[53] But the Canadian regulatory board was not constrained by the judicial system to make certain that capital was not confiscated. Indeed, it rejected the argument that rates should be based on fair value standards similar to those adopted in the United States.[54]

Regulatory failure came to a head in World War I. Concern over war-profiteering and the large operating surplus of the CPR made it increasingly difficult for the regulatory agency to grant rate

increases for the industry in general. This was a particularly difficult time for both the Canadian Northern and the National Transcontinental who were in the process of completing their lines. It was a time when operating deficits might have been expected to have occurred at any rate. The regulatory agency exacerbated the problem faced by these two lines because it failed to grant price increases that kept up with mounting costs. Indeed, at the outset of the war, it actually reduced Prairie rates by some 7.5 per cent and British Columbia rates by 25 per cent.[55] During the subsequent four years, the Prime Minister (Borden) made it clear to the regulatory agency that rail rates were to be kept down.[56] Rate increases were therefore extremely slow in being granted. Table 1 shows the course of both Canadian and U.S. freight rates during this time. The nominal rate per ton-mile was actually lower in 1917 than it was at the outbreak of the war -- even though the wholesale price index stood at 173 relative to 1913. Real rates fell from 78 cents per ton-mile in 1913 to less than 49 cents per ton-mile by 1917 for the CPR.

In response to a request for a rate increase made in early 1917, the regulatory commission finally granted a 15 per cent increase in March of 1918. The constraint that the unequal construction subsidies imposed upon the regulatory board is evidenced by the fact that this increase was accompanied by the imposition of an excess war profits tax on the CPR that then removed most of the benefits of the rate increase from the financially healthy CPR --

TABLE 1

Comparison of Real and Nominal Revenue Per Ton-Mile
Unites States and Canada, 1890-1924
cents/ton-mile (Cdn.)

	NOMINAL				REAL (1913=100)		
	All Canadian	C.P.R.	U.S.		C.P.R.	U.S.	
1890		84	94		104	117	
91		91	90		113	113	
92		84	90		112	120	
93		87	88		115	115	
94		87	86		123	125	
95		80	84		115	120	
96		75	81		112	122	
97		78	80		115	120	
98		76	75		107	108	
99		74	72		102	96	
1900		79	73		106	91	
01		75	75		98	95	
02		75	76		94	90	
03		74	76		91	89	
04		77	78		94	91	
05		77	77		91	89	
06		74	75		87	85	
07	82	78	76		85	81	
08	72	75	75		82	83	
09	73	76	76		82	78	
1910	74	78	75		83	74	
11	78	82	74		84	80	
12	76	77	73		75	74	
13	76	78	72		78	72	
14	74	75	72		73	74	
15	75	77	72		70	72	
16	65	64	71		49	58	
17	69	70	72		39	43	
18	74	85	85	86*	43	45	46*
19	96	100	97	101*	48	49	51*
20	100	104	105	118*	43	47	43*
21	107	120	128	143*	70	92	107*
22	120	100	118	120*	66	85	86*

Sources: Canadian Pacific Railway Submission, and
Canadian Historical Statistics.

*Corrected for substantial exchange rate differential.

a compromise that was possible only in wartime. But labour settlements in the rail industry rendered this increase inadequate for the other railways. The McAdoo award granted to railway labour in the United States increased rail wages substantially and this inevitably spilled over into Canada.[57] In Canada, average compensation of Canadian railway employees was 64 per cent higher in 1919 than in 1917.[58] Other rail costs also escalated dramatically. Freight fuel costs increased by over 55 per cent during the same period.[59] But nominal freight rates increased by less than 40 per cent (Table 2).

The result was a dramatic decline in profitability and ultimately bankruptcy. The ratio of net earnings to gross revenues for Canadian and American railways is presented in Table 2. For the Canadian Pacific, this ratio was halved between 1917 and 1921 but still remained positive. For all other Canadian railways, it fell essentially to zero by 1920 -- a result similar to U.S. railways.

The difference, however, was that the American government temporarily took over its railway network in order to compensate shareholders. This safeguarded the rights of the railway shareholders. The U.S. government did the same for the telephone industry. In Canada, however, two of the transcontinental railways ended up by being permanently taken over. The Canadian Northern's fate was sealed as of mid-1917 when the government passes a bill to acquire most of the stock remaining in private

TABLE 2

A Comparison of Net to Gross Earnings: Canada and the Unites States

1907-25
(Per cent)

Year	C.P.R.	Other Canadian	U.S.[b]
1907	34.9	23.9	29.6
1908	30.4	23.7	26.0
1909	30.0	25.6	28.7
1910	35.5	25.0	28.6
1911	35.2	24.9	26.3
1912	35.0	26.5	25.3
1913	33.1	24.2	25.3
1914	31.5	20.7	21.9
1915	32.8	19.6[a]	23.8
1916	37.0[c]		29.1
1917	39.1	[a]	23.3
1918	29.3	13.0	13.1
1919	21.5	4.2	8.8
1920	18.3	2.1	0.3
1921	12.8	neg.	10.9
1922	14.6	2.5	13.7
1923	15.4	7.3	15.3
1924	14.7	12.7	16.4
1925	14.9	12.7	18.3

a Figure not accurate because fiscal year dates change.
b For years 1907-16 for the fiscal year ending June 30, for post-1916, for the year ending December 31.
c The year 1916 includes the 18 months to end of year.

neg. .....

Sources: Canadian Pacific Railway Submission, and
Canadian Historical Statistics.

hands.[60] The Grand Trunk and the Grand Trunk Pacific were forced into receivership by the Canadian government in 1919. As argued in the first section of this paper, when the regulatory process is used in an opportunistic way, a utility can only continue to function if the public is called upon to provide the capital. This was the end-result in Canada of a failure to overcome the potential for transactions failure in the regulatory process.

c) Confiscation During the Expropriation Process

Considerable controversy has developed around the differential treatment accorded the two transcontinental systems. The Canadian Northern shareholders received some compensation; the Grand Trunk preference and ordinary shareholders were granted no compensation upon nationalization. One observer diplomatically described the difference: the Canadian government "treated a Canadian-owned railway generously; it was niggardly in its dealing with the Grand Trunk which was owned in Britain and whose shareholders had little political influence with the Dominion."[61]

Ultimately, the lack of compensation can be ascribed to an Arbitration Board that ruled the stock had no value.[62] And here the arguments of the majority on this Board clearly demonstrate the failure of the regulatory system to safeguard the interests of capital. The Grand Trunk argued that U.S. precedent established fair value as reproduction value. Indeed, the Arbitration panel

that had adjudicated the Canadian Northern case only two years before had valued the railway on this basis -- though the ultimate compensation was less than awarded.[63] The Grand Trunk arbitration board rejected reproduction cost after hearing government argument that since the Railway regulatory agency did not recognize reproduction costs, the earnings upon which value of the company should depend were unlikely to be related to this rate-base concept. What this argument ignored was the fact that the U.S. judiciary had not only ruled this to be the relevant concept for rate-making, but also for purchase in the event of termination of the franchise. Moreover, the government argument shows that the ultimate failure of the process lay not so much in the expropriation proceedings, but in the regulatory agency itself.

Even on the basis used by the Commission, it would appear that the nationalization of the Grand Trunk involved confiscation of property. The actual earnings of the Grand Trunk were understated just prior to nationalization in an attempt to get the government to aid the Grand Trunk Pacific. If these manipulations are taken into account, net earnings were positive and sufficient to even cover the Grand Trunk's obligations to the Grand Trunk Pacific.[64] Therefore, prior to the disastrous decline in real railway rates in 1918, the stock of the railway cannot be said to have had no inherent value. Moreover, to use the 1920 operating results, as the government arbitrators did to infer future profits, ignores the distortions occasioned by regulation. From 1918 onward, the

Canadian authorities kept Canadian rates at levels which Table 1 shows were well below U.S. rates; up to this time, the rates were generally similar.

The American regulatory system, as indicated, was constrained from expropriating capital. After the railways were handed back to private owners following the war, the U.S. railway regulatory commission had to recognize the cost of capital by increasing rates. This did not happen in Canada. At the time of arbitration, the Grand Trunk argued that if regulation in Canada was bound by the same guidelines followed in the United States, it would be operating with a surplus available for distribution to shareholders.[65] The confiscating effect of regulation was confirmed in the following year when the chairman of the newly formed government railway, the Canadian National, claimed:

> "If the Canadian National Railways in 1921 had had the benefit of the same freight and passenger rates as prevailed in the United States, it would have enabled the National Railways to have paid their operating charges and to have a net of $5,500,000 instead of a deficit of $15,900,000."[66]

Thus, the regulatory system was the primary reason for the bankruptcy of the transcontinental systems that were eventually nationalized.

Nationalization cannot be ascribed to one motive. It emerges from a complex set of forces that determine the outcome of the

political process. Yet, if the theory postulated here is correct, it should be accompanied by a form of expropriation or confiscation. For it is the instrument of last choice. It emerges when regulation fails as an efficient intermediator between the public and private sector. The Canadian railway example shows how that failure can develop.

Pushed by the political pressures of war, faced with railways of different strength -- partially itself the result of previous government policy, -- unconstrained by judicial rulings like their counterparts in the United States, the Canadian regulators forced real rail rates to record low levels and reduced net earnings of some rail lines to zero. The Canadian government, reacting to political pressures as well as a xenophobic dislike of one of the two railways that went bankrupt at the time, acted in what at best can be called a discriminatory fashion. Whether these results were beyond the control of those in charge is not the issue. In the end, capital had to rely on the goodwill of the state for protection from confiscation. Reliance on such goodwill, without the protection afforded by a written constitution that guaranteed the right to private property, proved inadequate.

2) The Case of Ontario Hydro

a) Introduction

During the first two decades of the twentieth century, the electrical utility industry in Ontario was transformed from one with a substantial private component to one where the Crown corporation, Ontario Hydro, dominated both production and distribution. Its creation, like that of the Canadian National, was accompanied by a failure in business-government relations and blatant opportunistic behaviour on the part of the Canadian state.

Like the railway case, the transactions failure was due partially to the fact that imperfect foresight was exercised in stipulating the conditions in the original franchises granted to monopolies. Technical change necessitated recontracting and during that exercise, political ideology associated with the public power movement was used to void protection granted to investors in the original agreements -- without any form of compensation.

b) Historical Development of the Industry

The development of hydro-electricity in Ontario gathered impetus between 1899 and 1903 as three major franchises at Niagara were

awarded and construction begun -- by two American companies, and one Canadian company -- the Electrical Development Company. The latter was pioneered by substantially the same investors that owned the Toronto Electric Light Co. and the Toronto Railway Co.. Indeed, the generating company was formed with these two customers in mind.

The franchises awarded to generating companies were in the form of contracts that stipulated the amount of horsepower that could be developed, and the annual payment to the state.[67] The franchise given to the Electrical Development Company stipulated that the government, through its agent, the Niagara Falls Park Commissioners, covenanted not to enter into direct competition in the generation of power.

The franchises in Toronto were also Demsetzian-like contracts, with set length (thirty years each) and stipulated service conditions. For instance, the Toronto Railway Company promised conversion to electricity from a city-operated horse-drawn service and annual payments per track-mile.

The franchise system adopted at first in Ontario had some of the same problems that franchises had experienced in the United States. The pace of change made the initial terms of the contracts obsolete. And the process of renegotiation was far from satisfactory. In the case of the power-generating stations, the

state had little idea of the long-term potential of the Niagara Falls, partially because of the uncertainty associated with long-distance transmission of electricity, partially because of the failure to appreciate that domestic demand would expand sufficiently long before the expiration of the franchises to require a redirection of power that was initially contracted for export. The initial terms of the contract, which extracted relatively low franchise fees[68] and, in the case of the Electrical Development Co., which gave a monopoly, quickly became outdated.

The franchise that was granted to the Toronto Street Railway also soon proved to be inadequate. Although the City of Toronto was given the right to demand that service be extended to areas that it designated, the Canadian Supreme Court ruled in 1906 that this did not extend beyond the city limits in effect in 1891 -- a most unsatisfactory state of affairs for a rapidly expanding metropolis.[69] Moreover, the fixed term of the franchise proved to have the same disadvantage it did in the United States. By 1910, it was being argued that few improvements were being made by the Toronto Street Railway because it did not expect to have its franchise renewed in 1921.[70]

c) The Emergence of Ontario Hydro

As the private generating plants were constructed at Niagara Falls, a populist movement for the public provision of power

gained momentum. In its first phase, Ontario Hydro was essentially a distribution company. Enabling legislation was passed in early 1907, bids for power from Niagara Falls producers were solicited in 1907, transmission lines begun in 1908, and the first power delivered to Berlin in 1910.

But while the Commission started as a distribution company, it was given in essence the powers of a regulatory authority. It could fix rates charged by generating companies and could expropriate their generating power plant.[71] Initially, at least, it tried to use these powers to dictate to the Electrical Development Company the territory in which it could sell -- restricting it only to Toronto.[72] Moreover, the government in succeeding years made it all but impossible to challenge any of the actions of the Commission by declaring its contracts to be beyond the jurisdiction of the courts. In effect then, a regulatory commission was established over which the courts had little or no jurisdiction.

The second phase of Ontario Hydro saw it move into the generation of power. In 1914, Hydro purchased a generating plant on the Severn River, in 1916 on the Trent, and in 1917, it purchased the Niagara generating capacity of Ontario Power at Niagara. It then proceeded with construction on the Queenston Heights-Chippewa Creek project that was essentially completed in 1921.

d) Opportunism

(i) The Conmee Clause

During the evolution of Ontario Hydro, the state reneged on two contractual obligations it had made to the private sector. In 1899, a clause, known as the Conmee clause, was inserted in the Ontario Municipal Act that was intended to prevent municipalities from expropriating, either directly or indirectly, private capital committed to gas, electric light or water works. Before municipalities could create their own companies in these spheres, they were required to purchase any existing private companies at a fair price after arbitration.

It was under the protection of this clause that the Toronto Electric Light Company began to organize efforts to bring electricity from Niagara Falls to Toronto. The work at Niagara started in 1903 and by 1906, the cornerstone for the power-generating station was laid. At the same time, a transmission line was constructed from Niagara Falls to Toronto that would provide power to the Toronto Street Railway and the Toronto Electric Light Company. Power first reached Toronto via this line in December 1906, power to supplement the steam electric plants that had already been built.

Unfortunately, what protection legislatures offer from political opportunism can also be removed. As long as the provincial government had no direct interest in hydro production, it was willing to constrain the arbitrary use of authority. But as it moved into the ownership area itself, it removed the protection offered by the Conmee clause. In 1906, the first Hydro Act was introduced into the legislature. The Conmee clause was declared not to apply to municipalities obtaining power from the Commission.[73] As such, the City of Toronto no longer had to offer protection to the private capital that had been invested to serve the city. Toronto then entered into a contract with the Hydro Commission and proceeded to build its own distribution system in competition with the private Electric Light Company.

Repeal of the Conmee clause allowed Ontario Hydro to proceed without having to bear the expense of expropriation. With its establishment in 1906, it faced a difficult problem. While the Ontario Power Co. had offered the cheapest electricity, it had no transmission system. The privately owned Electrical Development Co. had both generating capacity, a transmission system to Toronto and the distribution system in the Toronto Electric Light Company and the Toronto Railway Company. But without Toronto, Ontario Hydro promised to lose whatever economies of scale existed at the generating level.

Throughout the period, successive Ontario Premiers were acutely aware that public acceptance of state initiatives to provide power itself depended upon the costs not being too high. In 1902, as the debate raged as to the nature of public intervention, the Liberal Premier Ross expressed concern about the use of the public treasury to benefit towns in a geographically limited part of Ontario.[74] In 1905, the new Conservative premier, Whitney, worried about the expense of having to buy out existing concerns -- envisaged to be between $5 and $25 million.[75] Because the original Hydro Act required municipal councils to approve bylaws authorizing contracts with Hydro, there was some pressure to minimize the cost to ratepayers of buying publicly distributed power. Appeal of the Conmee clause did exactly that.

The resulting effect on the private generating company was not surprising. The Electrical Development Company ran into acute financial difficulties. It found itself unable to raise capital from financial markets that were increasingly leery of expropriation. While the government was short-tempered with those who claimed that expropriation without compensation might take place -- pointing that the Hydro Act specifically promised compensation for expropriation[76] -- it seemed not to understand the fear of the financial community that expropriation could come equally from unfair competition -- from a government-owned company that was not required to bear the same costs as a private company. Initially, the Hydro Commission did not pay any municipal tax and then eventually only on land and not on improvements.[77]

(ii) The Power-Generating Clause

The second instance of opportunism occurred as the Hydro Commission moved into the power-generation field during World War I. The Ontario government violated its contractual obligation that it not enter into competition with the Electrical Development Company in the field of power generation. With the purchase by Ontario Hydro in 1917 of the Ontario Power Company and its generating facilities at Niagara Falls, the protection afforded the Electrical Development Company was specifically voided.

It should be noted that Ontario Hydro's transition from that of a distributor of electricity to that of as producer with its concomitant breaching of the Electrical Development Company's franchise was accomplished during the emergencies of World War I. Ontario Hydro's chairman used the crisis to the best of his advantage.[78] First, by charging the private company with exporting illegal quantities of power to the U.S., and by having a Commission of Investigation focus public opprobrium on the company, he effectively undercut any sympathy that might otherwise have existed for the private sector. That the power exports were supporting U.S. munitions contracts with Britain and that Ontario Hydro was making similar exports reduced the creditability of his contentions -- at least in hindsight. But at the time, as Nelles has noted: "The war itself confused matters and exaggerated

feelings."[79] Whatever the characterization of Ontario Hydro's Chairman's actions that is adopted, there is little doubt that it served to effect the final transition of Ontario Hydro to a full-fledged large producer of energy. As with the railway case, public need was adduced as reason for ignoring previous public commitments that had been made to those willing to invest in long-lived immutable capital.

The franchise clause that was voided in 1916 was meant to protect the privately committed capital at the generating level from the same sort of unfair competition that the Conmee clause had tried to restrict at the municipal level. It was not long before events illustrated just how one-sided competition can become when the publically owned company can use the power of the state to favour itself.

Between 1916 and 1918, the escalating demands for power generated by World War I strained the power-generation capacity at Niagara Falls. At the time, substantial exports were being made to the United States -- much of it going to aid the war-effort. Beck, as head of Ontario Hydro, called upon the federal authorities to cut such exports and publically decried the exports of the Electrical Development Company. Even while doing so, it appears that Ontario Hydro was actually exporting considerably more power than the privately owned Canadian company.[80] Beck's position with Ottawa was that his own company should be permitted

to continue exports (at the higher American prices) but that the private companies should be cut back.[81] Beck used his vaunted political power to threaten to run Hydro candidates in a forthcoming federal election.[82] In the end, Ontario Hydro had its way and the federal authorities rerouted power the private companies were exporting to Ontario Hydro.[83] As Nelles has pointed out, cancellation of exports removed one of the few supports the private company could rely upon which in time "would... throw them into complete dependence upon the commission."[84]

(iii) Exemption of State Action from Judicial Review

What was striking about these episodes was the Ontario government's reluctance to use the courts to adjudicate the claim of the aggrieved private interests. At an early stage, the government appended clauses to various Hydro acts which prevented the adjudication process from being used. In the acts of both 1906 and 1907, the public was joined from bringing any action against the Commission "without the consent of the Attorney-General for Ontario."[85] Thus, the political authorities could choose whether to permit the courts to exercise constraint directly on the validity of actions by its agent -- the Hydro Commission. However, indirect constraint was still possible via a challenge to contracts entered into by municipalities with the Hydro Commission. When the Mayor of Galt refused to sign a contract on the basis that it did meet the terms of the Hydro Act, legislation

was enacted in 1909 stipulating the contract "shall be treated and conclusively deemed to have been executed by the said Corporation of the Town of Galt."[86] Moreover, at the same time, another clause was enacted that stipulated that any other actions being brought questioning contracts with the Hydro Commission were to be "forever stayed."[87]

While appeal was made to the courts of this attempt to place the contracts beyond the power of courts, Canadian judicial rulings made it clear that the legislature was paramount.[88] Contrary to the situation in the United States, no constitutional protection was available for the sanctity of contracts -- if the legislature chose to override such contracts. Moreover, the Canadian courts made it clear that no protection was afforded private property from confiscation.[89]

After the Hydro Commission had taken over the Ontario Power Commission and had made plans to develop new power itself at Niagara, the Ontario government also passed legislation to validate the breach of contract that protected the Electrical Development Company in its original franchise.[90] Once again the legislature simply removed the protection afforded private capital with no compensation and thereby prevented any recourse to the protection afforded by the courts.

c) Conclusion

Others have asked why Ontario, in contrast to most other North American jurisdictions, nationalized its electrical utility. After all, the economic characteristics of this industry were the same in Ontario as elsewhere. But, as emphasized in the opening section, it is not the monopolistic tendency per se that leads to nationalization; since, regulation of private enterprise was adopted elsewhere to restrain monopolistic exploitation of franchises. Nor, as Nelles points out, is it easy to argue that the tendency of municipalities to own their own distribution plant led Ontario to extend ownership to transmission land generation. American municipalities also often owned local electric utilities.[91]

The difference in the two country's experience lies in the political arena -- what Nelles refers to as the "statist political tradition" of Canada. But leaving it at that is inadequate. For it would appear to imply that Canada in some sense had a preference fo the government-imposed solution. An important difference was that the United Sates had a constitution that valued the sanctity of contract and that did not allow the political authorities to exclude their actions from review by the judiciary. In Canada, Parliament was paramount. The Ontario Hydro case illustrates how a determined legislature can void its contractual responsibilities and nullify the potential protection offered private property by the judicial system.

In the end, the result was similar to that found in the railway sector -- the creation of a large public enterprise as a regulatory instrument.

E) THE EFFICIENCY OF REGULATION AS OPPOSED TO PUBLIC ENTERPRISE

The contention that the lack of constitutional constraint upon opportunistic behaviour by the Canadian state biased the institutional choice towards public enterprise does not rest upon the assumption that public enterprise is a less efficient instrument than regulation for state intervention in the case of natural monopolies. As long as both might be considered, then the relative price effect that results from unconstrained state opportunistic behaviour will produce somewhat more public enterprise -- though as explained, there is no reason to posit that all regulatory situations will end in nationalization because of transactions failure.

However, the relative efficiency of public enterprise and regulation does require further comment. In the control of natural monopoly, each provides a different solution to the internalization problem. The primary difference is that regulation generally leaves the means of production under private control; public enterprise does not, and therefore has attendant efficiency ramifications.

That public enterprise is likely to be less efficient that its private counterparts is well-ensconced in the literature -- though it has recently been challenged by Wintrobe (1984). That public enterprises provide services which the body politic finds useful

and therefore has some incentive to economize on resources so as to produce such services does not mean there will be the same degree of efficiency in public as opposed to profit-maximizing private firms. The end-result will depend upon the degree of pressure placed upon management in each case. In the case of public enterprise, the pressure placed by the owner (the state) to provide public services (vote-maximizing behaviour or some other objective) is likely to be high, but their ability to measure the marginal impact of many resources decisions is likely to be much less than in the private sector. It is probably harder in many situations for a government to judge the political value of a public enterprise's actions than it is for management of a privately owned firm to evaluate the effects of changes in its product mix. A product such as an Edsel has its success quickly gauged. The effect of Air Canada's dropping a route is more difficult -- especially when the product is not being voted on immediately -- but only with a lag.

There is a second reason why public enterprise may be less efficient and why governments may prefer regulation. When governments choose agents to sole a political problem, they generally are not certain of the policy required. Thus they cannot be certain of the outcome. In particular, they cannot be certain that the creation of an agent will not lead to demands by specific groups that had not been anticipated. The very creation of an agent may lower the costs of lobbying by specific groups.

For example, when a Crown railway does not exist, the governing party can only obtain patronage jobs by a complex arrangement with the private railways that are being regulated. When a Crown railway does exist, it is more difficult to resist the bagman who asks for jobs on the railway. The outcome of any bargaining process depends upon the determinants of the demand and supply for a political favour. Reducing the cost may increase the amount of an undesirable by-product -- such as overmanning or the inefficient use of resources, even though it, per se, is not positively valued by the state. In the case of natural monopolies, it is primarily rate control that is being sought. If an alternate institution such as regulation can provide the same public service in the way of rate control, there is no reason to go to public enterprise -- only a potential cost.

The irreversibility problem associated with government policies makes this problem with public enterprise particularly important. Once implemented, governments find it very difficult to reverse policies -- much more so than firms. Recognizing this problem, governments are more likely to act cautiously. Consider once again the case of the creation of a public enterprise where the government is not certain whether overmanning or gold-lating will occur. If it does, and if there are private firms operating that provide a standard of comparison, it may turn out to be embarrassing, and involve a substantial political cost. All of the utilities generally discussed under the rubric of natural monopoly

where nationalization occurred in Canada were in the situation that private companies continued to exist in nearby proximity to public ones. The public outcry against government enterprise inefficiency has been considerable. Royal Commissions into Ontario Hydro efficiency and conflicts over overmanning on the Inter-Colonial Railway all were considerable embarrassments to governments of the day. It is for this reason that the inefficiency of public enterprise should be viewed as a cost not a benefit when it comes to the political calculus that determined institutional choice.

It should be emphasized that the view of the public output being demanded in the case of natural monopolies is important for the proposition being developed here. Some publicly valued services are difficult to negotiate via a regulatory agency and will be more effectively implemented by a public enterprise. In the case of the Canadian air transport industry, the regulatory agency had difficulty restraining deviant or strategic behaviour on the part of regulated firms. But the natural monopoly industries produced, as argued, a demand for public input that was essentially related to price control -- the absolute level and the price structure. Regulatory agencies have proven equally effective as public enterprise in allowing governments to control the rate structure. Thus there is no advantage to having a public enterprise with respect to the output being provided -- only a potential cost.

If this argument is correct, then the implications of this paper extend beyond the provision of a framework within which events can be more readily understood. For then the nature of the constitutional constraints (or relative lack thereof in Canada) may be said to have had negative consequences. Their inadequacy can be said to have forced Canada into an institutional choice that was less than optimal. These constraints, however, can be changed. And those who are readily convinced of the inefficiency of public enterprise would be better advised to modify these constraints, than simply advocate the privatization of public enterprise. For without a basic change in the causes that led to nationalization, the privatization process is likely to be short-run in nature and eventually reversed by the underlying forces catalogued herein.

F) CONCLUSION

There are at least two hypotheses that could be used to explain why Canada has more frequently chosen to use public enterprise than has the United States. It could be a result of a greater taste for public enterprise. The demand in Canada for public enterprise may have been greater because of certain societal goals. Or it could be the result of the cost of regulation being higher relative to public ownership -- a relative price effect. Both would predict greater frequency of public enterprise as opposed to regulation, and it is therefore difficult to discriminate between them. While we cannot hope to eliminate the taste argument, we can at least indicate the facts are also compatible with the relative price rationale.

If the relative price argument is correct, we should expect to find the transition from a form of regulation to public enterprise to have been accompanied by transactions failure. In particular, we should expect to find the state acting in an opportunistic manner. In two major cases, the railways and the hydro-electric sector, this was so. There is, of course, still the argument that the relative price effect may have been insignificant compared to the taste effect. But the fact that politicians in each case recognized there was some doubt that political support could be mustered for nationalization if full compensation had to be paid private capital, suggests the participants in the process appreciated the significance of the relative price effect.

The examples chosen to illustrate the applicability of the theory are both taken from around World War I. The passage of time permits sufficient details to be unearthed by researchers that a reasonably complete picture of events can be reconstructed. That is not the case for more recent nationalizations -- such as Hydro-Québec. The temptation to extend the examples has therefore been avoided. Nevertheless, it is not argued here that all recent nationalizations have also been the result of a transactions failure of the type described here. Indeed, in light of the gradual evolution in Canadian court rulings that began to set U.S. standards for the Canadian authorities,[92] a set of non-binding constraints did develop which should have made the institution of regulation as opposed to nationalization less costly.

The approach that has been adopted here does not provide an irrefutable theory to explain the choice of all Crown corporations. For one thing, we have focused on the reason for contractual failure in only one area -- that of natural monopoly. However, the focus -- that of contractual failure -- is probably the appropriate one even in other situations. Of course, the reason for contractual failure may differ elsewhere. Air Canada (Trans-Canada Airlines) was not intended to be 100 per cent government-owned at its inception. A partnership with the CPR was offered and rejected, probably because Canadian Pacific knew the value of its minority position depended upon government actions

that might not always have profit maximization as their motive. While this was a different type of contractual failure, it is nevertheless closely related to the one discussed herein.

Ultimately, the importance of the approach taken here extends beyond the reinterpretation of historical events. Our message is that contractual failure lies at the heart of the explanation of instrument choice. Society must solve the same problem that arose here -- but in other contexts, if a varied range of options is to be open to it for policy purposes. The state has to find a way to write a "fair" contract and bind itself to the terms thereof. The regulatory process was chosen as a way to decide upon the terms of a fair contract in one context. Its independency status and its elaborate rules were aimed at establishing its authority to decide a fair contract -- one that was not unduly influenced by narrow partisan considerations. But even so, the regulatory agency could not work until it was constrained from opportunistic behaviour -- until it was forced to abide by the terms of the contract which it negotiated.

More recently, the Canadian government has embarked on a whole new series of initiatives that only relate peripherally to the original thrust of intervention aimed at protection of consumers from exploitation from natural monopoly. Regional development objectives, industrial strategy, energy policy, and aviation policy have all led to the establishment of public enterprises.

In some instances, it may be that traditional transactions failures -- relating to difficulties in auditing, information processing, and incentives -- explain the entry of public enterprises. But the role of moral hazard problems should not be discounted as the Air Canada example was meant to indicate. In most cases, the success or failure of an initiative depends upon other aspects of government policy. And government policy, in other areas, is sufficiently unpredictable that all contingencies cannot be carefully considered in the terms of the original contract. Recontracting will therefore be required and moral hazard of the sort evidenced in the railway nationalization example can create problems. However, in most instances, no protection is available to the private parties concerned should political pressures lead to opportunistic behaviour. The establishment of a public enterprise is one of the few ways in which such externalities can be internalized.

The ability of the government to constrain itself in these situations permits consideration of a wider range of policy instruments than just public enterprise. Where there are efficiency benefits from the organization of production in private hands, or where, as in the private sector, there are benefits from sharing risk through a franchise type arrangement, the government may want to choose an instrument other than a public enterprise. If it cannot solve the transactions failure that is associated with the moral hazard attendant with government activity in

general, it really has no choice but to use public enterprises as the instrument of government policy. A more complex form of contract is unavailable.

If a broader range of contractual arrangements are to be considered and if policy thrusts are to be considered without accompanying them with the creation of Crown corporations, the moral hazard problem that so often accompanies government contracts must be faced directly. If it is not, then this paper suggests one instrument, public enterprise, will receive unnecessary emphasis. Those who embrace the objectives associated with more recent policy thrusts, but are uncomfortable for political or economic reasons with the continued spread of public enterprises, will want to consider the type of safeguards that might allow alternate contractual arrangements that would meet some of the same objectives.

G) FOOTNOTES

1. See Thomas Borcherding, "Toward a Positive Theory of Public Sector Supply Arrangements," in J.R.S. Prichard, 1983.

2. Ibid. and M.J. Trebilcock and J.R.S. Prichard, "Crown Corporations: The Calculus of Instrument Choice," in J.R.S. Prichard, 1983.

3. Baldwin, 1975, and Baldwin, 1982.

4. Kahn, 1970, Vol. I, provides a good summary of the traditional view.

5. Demsetz, 1968.

6. Williamson, 1971, 1979, 1981a, 1981b; Williamson et. al. 1975.

7. Williamson, 1975, ch. II.

8. Intergenerational transfers of wealth could, of course, still occur with public ownership, and thus the efficiency problem is not completely resolved by state ownership.

9. For histories of these industries, see Barnes, 1942, and Thompson and Smith, 1941.

10. See MacAvoy, 1965.

11. Barnes, 1942, p. 170.

12. Ibid., p. 171.

13. Barnes, 1942, p. 225; Thompson and Smith, 1941, p. 167.

14. See Thompson and Smith, 1941, p. 157, and Barnes, 1942, p. 22, for a fuller description of the fees demanded.

15. This problem became particularly acute between 1910 and 1920 when price levels increased about 150 per cent.

16. For an account of New York politics, see Myers, 1974.

17. Barnes, 1942, p. 221.

18. Thompson and Smith, 1941, p. 160.

19. Ibid., p. 165.

20. Slaughter-House Cases, 83 U.S. (16 Wall) 36(1873).

21. See Barnes, 1942, p. 198.

22. Stone v. Farmers' Loan & Trust Co., 116 U.S. 307.

23. Reagan v. Farmers' Loan & Trust Co., 154 U.S. 362, 1894.

24. Smyth v. Ames, 169 U.S. 466, 1898.

25. The lower courts had ruled earlier in the 1890s on this matter. See Barnes, 1942, p. 371.

26. Ibid., p. 373.

27. For one of the few scholarly works devoted entirely to this issue, see Smith, 1932.

28. See Barnes, 1942, pp. 523-5, who notes these points were summarized in Bluefield W.W. & Imp. Co. v. W. Va. 262 U.S. 679, 692, 1923.

29. Originally recognized in Reagan v. Farmer's Loan & Trust Co.

30. Willcox v. Consolidated Gas Co., 212 U.S. 19, 48-49, 1909.

31. Bluefield.

32. Ibid.

33. See Thompson and Smith, 1941, pp. 358-9.

34. See Bluefield.

35. See Phillips, 1965, p. 267, quoting Public Service Comm. of Montana v. Great Northern Utilities Co., 289 U.S. 130, 135, 1935.

36. See Barnes, 1942, p. 378.

37. Willcox v. Consolidated Gas Co., 212 U.S. 19, 1909.

38. Newton v. Consolidated Gas Co., 258 U.S. 165, 1922.

39. McCardle v. Indianapolis Water Co., 272 U.S. 400, 1926.

40. See Thompson and Smith, 1941, pp. 292-5.

41. Barnes, 1942, p. 504.

42. Lindheimer v. Illinois Bell Telephone Company, 292 U.S. 151, 1934.

43. See Phillips, 1965, p. 227.

44. Federal Power Commission v. Natural Gas Pipeline Co., 315 U.S. 575, 586, 1942.

45. See Phillips, 1965, p. 230.

46. Jarrell, 1978, p. 270.

47. Ibid., p. 271.

48. Land grants were also attached to other charters granted, many of which were eventually purchased by the Canadian Northern (see Stevens, pp. 22-8).

49. Glazebrook, 1962, p. 145.

50. Glazebrook, 1962, p. 131.

51. See MacIntosh, 1938, for a description of Prairie resentment directed at the CPR.

52. For a discussion of the pressures placed on the government to equalize freight rates, see Jackman, 1935.

53. For a history of railway regulation in Canada, see Wright, 1963.

54. Currie, 1949, p. 148.

55. The Western Rates Case, Currie, 1957, pp. 534-5.

56. Currie, 1957, p. 478.

57. Stevens, 1962, p. 419: Currie, 1957, p. 445.

58. Fournier, 1935, p. 88.

59. Ibid..

60. Stevens, 1962, pp. 483 and 511.

61. Currie, 1957, p. 479.

62. The Prime Minister at the time is reported to have been hostile to the Grand Trunk. Stevens, (1962, p. 458) reports that "in 1908 he [Borden] believed that the company had abandoned its political neutrality and had committed itself to the Liberal cause, whereupon he wrote testily... that if the Grand Trunk wanted a fight, the Conservative Party would be ready to oblige." Yet a reading of Borden's offers to the Grand Trunk prior to the establishment of the

Arbitration Board suggests no niggardliness. Whether he let this attitude influence his pressures on the regulatory agency is more difficult to evaluate.

63. Stevens, 1962, pp. 486-7.

64. This was summarized by the Grand Trunk's representatives on the Arbitration Panel -- former U.S. President Taft. Taft was particularly well qualified in the matter of valuation since he had been instrumental in getting the U.S. Interstate Commerce Commission to officially value the investment base of U.S. railways, Currie, 1957, p. 460.

65. Glazebrook, 1962, p. 173.

66. Stevens, 1962, p. 521.

67. Mavor, 1925, pp. 30-31.

68. In 1906, the government received only $60,000.

69. Hall, 1968, p. 97.

70. Hall, 1968, p. 99.

71. Mavor, 1925, p. 55.

72. Ibid., pp. 89-92.

73. Ibid., p. 53.

74. Nelles, 1975, p. 239.

75. Ibid., p. 260.

76. Canadian Annual Review, 1909, p. 374.

77. Mavor, 1925, p. 220.

78. Nelles, 1975, pp. 362-5.

79. Ibid., p. 370.

80. Ibid., p. 367.

81. Ibid., p. 368.

82. Ibid., p. 370.

83. Ibid., p. 371.

84. Ibid., p. 367.

85. Mavor, 1925, p. 114.

86. Mavor, 1925, p. 138, see also Nelles, 1975, p. 292.

87. Ibid.

88. Nelles, 1975, p. 292.

89. Ibid.

90. Mavor, 1925, p. 140.

91. Nelles, 1975, p. 222.

92. Challies, 1963.

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BUREAUCRATS AMONG THE BUSINESSMEN:

INFLUENCING THE PRIVATE SECTOR THROUGH CROWN CORPORATIONS

by

Kevin La Roche and Kernaghan Webb
Of the Law Reform Commission of Canada

RÉSUMÉ

Bureaucrats Among the Businessmen constitue une étude préliminaire des façons dont les sociétés de la Couronne peuvent être utilisées dans le but d'agir sur les comportements du secteur privé. A ce titre, elles sont à la fois des organismes réglementés au même titre que leurs homonymes du secteur privé, et des régulateurs qui tentent d'influencer leur conduite.

Le document se penche sur trois méthodes principales d'intervention. La société de la Couronne peut prêcher par son exemple (par ses pratiques de gestion, en innovant au titre des produits ou de l'entreprise, etc.), conclure des ententes avec le secteur privé (contrat d'entreprise conjointe, etc.) ou ajuster les prix ou le marché. Certaines caractéristiques propres aux sociétés de la Couronne peuvent en faire de meilleurs instruments de mise en application de programmes que les techniques plus traditionnelles. Ainsi, elles peuvent agir à l'extérieur du champ d'action législatif du gouvernement, ou appliquer une politique de développement qu'aucune législation ne pourrait élaborer correctement. Ces caractéristiques et d'autres, jointes à l'influence que les sociétés de la Couronne peuvent exercer, en font des instruments privilégiés de mise en application de programmes lorsqu'il est impossible ou inapproprié de recourir à la régulation ou aux stimulants financiers. Le document donne des exemples de sociétés de la Couronne qui agissent sur le comportement du secteur privé; chaque cas est analysé.

Tenter d'influencer la conduite du secteur privé par le biais de sociétés de la Couronne soulève d'importants problèmes. Le document explore notamment les difficultés inhérentes à la conciliation des objectifs de programmes avec la maximisation du profit, de même que celles qui posent le choix des objectifs à atteindre.

Les auteurs ne prétendent pas que le recours aux sociétés de la Couronne puisse remplacer les moyens traditionnels de mise en application des programmes. Ils croient cependant que ces sociétés peuvent agir sur les comportements et, ce faisant, peuvent servir de complément avantageux aux méthodes plus classiques. L'important, pour eux, est qu'on procède à une étude approfondie de la question, de manière à mettre au point les structures juridiques et politiques qui s'imposent.

ABSTRACT

Bureaucrats Among the Businessmen is a preliminary exploration of the use of Crown corporations as instruments for influencing the conduct of the private sector. In this influencing capacity, Crown corporations are at one and the same time regulatees, rubbing shoulders with their private sector counterparts, and regulators in the sense that they attempt to alter the behaviour of private firms.

The paper suggests three major methods of influence: the setting of examples (through product or corporate innovations, management practices, etc.), contractual arrangements with the private sector (e.g., joint venture agreements), and market/price adjustments. Crown corporations possess a number of distinctive characteristics which can render them better vehicles for policy implementation than more traditional techniques: they can operate outside of their government's sphere of legislative authority, they can follow a developing policy which cannot be precisely articulated in legislation. These distinctive characteristics (and others), coupled with their influencing capabilities, can make them appropriate instruments for policy implementation where direct regulation or financial incentives are unsuitable or unavailable. Examples of Crown corporations influencing the private sector are described and analyzed in the paper.

There are also significant problems with the influencing technique and these are examined in the paper: for instance, the difficulty of reconciling policy goals with profit maximization, and the problems of selecting which policy objectives to pursue, to name but two.

It is not suggested that Crown corporations as instruments of influence will ever replace the more traditional policy implementation techniques. However, the influencing capabilities may be useful adjuncts to the traditional methods. The paper urges further investigation of this potential, so that appropriate legal and political structures can be designed.

Introduction

That the Economic Council of Canada should be sponsoring a colloquium on government enterprise is an indication of the growing Canadian awareness of the role Crown corporations can play in achieving government objectives. The Administrative Law Project of the Law Reform Commission of Canada is keenly interested in such issues in the context of its studies about policy implementation. It is our opinion that, before responsive and equitable legal frameworks for policy implementation can be designed, the characteristics, strengths and weaknesses of policy instruments, institutions and actors must be examined.

The 1970s saw increasing recognition that the old standbys of policy implementation -- command-penalty offences, command and control regulations -- were frequently inappropriate, blunt and heavy-handed methods of policy implementation. Both the ECC's impressive "Reforming Regulation" initiative, and our own studies, have led us to believe that in the 1980s, more sophisticated approaches to policy implementation are necessary, summoning all available resources of government to bear. To this end, the project has conducted field level research of how current regulatory regimes actually operate, as well as more tentative studies exploring the use of financial incentives, contracts, etc.[1]

In the course of research for our two major empirical studies to date -- those concerning the regulatory regimes of the CRTC and the Environmental Protection Service (EPS) -- the researchers became aware of the important policy implementation functions which Crown corporations can serve. In the context of the CRTC regime, for example, the CBC is a leading proponent of Canadian programming, providing an example for private broadcasters, and a benchmark for the CRTC. Similarly, in relation to the EPS regime, it was noted that the environmental practices of Crown corporations such as Petro-Canada can affect the behaviour of private sector regulatees. In short, the whole question of Crown corporations and their relations to government and the private sector is crucial to an understanding of modern Canadian policy implementation regimes.

It is in this context that the Administrative Law Project has conducted preliminary investigations into the policy implementation potentials of Crown corporations. Fortunately, as a basis for our own research, we have been able to avail ourselves of the work of a number of other authors on issues such as commercial and public interests, and the use of government enterprise to directly implement policy objectives.

In the present paper, we investigate another aspect of Crown corporations: their potential as instruments for <u>influencing the conduct of the private sector</u>. In this influencing capacity,

Crown corporations are at one and the same time regulatees, rubbing shoulders with their private sector counterparts and regulators, in the sense that they attempt to alter the behaviour of private firms.

The idea of using Crown corporations to influence private firms is not one which comes easily to mind. One tends to think that the interests of private enterprise are unalterably opposed to many of the objectives of government in the social-welfare and interventionist age, and one tends to conclude that traditional regulation of the command-penalty type is the only means of soliciting the compliance of private firms to public objectives. Yet it is becoming increasingly clear that command-penalty regulation can be an inefficient and ineffective means of policy implementation. Regulatory agencies themselves have moved towards less confrontational, more negotiatory and accommodative techniques, realizing that private entrepreneurs will respond to government overtures in a real way only when it is in their interests to do so, and only to the extent that their interests dictate. Indeed, given that private firms are directly responsible for their actions to their shareholders, and not to the state, it might be unreasonable to expect them to behave in any other way. Crown corporations, as policy instruments, can play upon this fundamental characteristic of the private firm, for, as competitors, suppliers and purchasers, they can have a pronounced effect on the private firms' commercial interests.

Moreover, Crown corporations can do so with a view to achieving both economic and social policy goals. As R.F. Cranston suggests, in a 1982 article, "... a government enterprise may be a more effective and efficient instrument than regulation in fostering competition, encouraging private enterprise to improve the standards of its products and services, and setting the pace for standards of health and safety at work."[2]

Before examining the distinctive characteristics, strengths and weaknesses of public enterprise as instruments of influence on the private sector, a few preliminary points of clarification are in order. First, for the purposes of discussion in this paper, we will be referring only to those types of Crown corporations which compete directly with private firms. Federally, these include what have been called "Schedule D" corporations -- "commercial" Crown corporations. By singling out this particular type of public enterprise, we do not mean to suggest that other types can or could not be used to influence; rather, we think that the competitive commercial Crown corporation provides the most illustrative examples, on the basis of our research to date.

A second preliminary point is that the practice of using the public commercial enterprise as a vehicle of influence is probably quite widespread. Even at this early stage of research, we have found numerous examples which speak to the apparent capacity of Crown corporations to influence private firms. However, we lack

the detailed information needed to make fair assessments of the influencing potential. We feel that persons with closer Crown corporation contacts will be able to provide many more in-depth illustrations of the influencing phenomenon -- both favourable and unfavourable. More empirical information is needed, as our own data is woefully incomplete.

Finally, it is perhaps self-evident that our discussion of the influencing capabilities of Crown corporations should not be taken as fervent support for its use, nor should it be taken that we believe exploitation of this ability will radically improve the effectiveness of policy implementation regimes. Rather, we merely wish to draw attention to its potential, and promote further studies along this line. Crown corporations as influencing agents will never replace the more traditional policy implementation techniques, but they may be useful partners in policy implementation. Compliance by influence rather than order is an aspect of public enterprise behaviour which policy planners, legislators, administrators, businessmen and the public should be more aware of.

Format of Paper

Commentators have described how certain distinctive characteristics of Crown corporations render them particularly useful for policy implementation purposes. The ability of Crown

corporations to engage in a commercial activity outside the regulatory jurisdiction of their governments, to gather hard-to-come-by information about a regulated sector, and to carry out vague policy objectives of government and other abilities, are highlighted in the first part of the paper. It is suggested that these characteristics fully complement the influencing capabilities Crown corporations. Next, the various methods by which Crown corporations can influence private sector behaviour are set out. We identify the setting of examples (i.e., in safety standards, services, hiring practices), contractual arrangements, and market/price adjustments as three major influencing techniques. Of course, use of Crown corporations as influencing agents is not without its share of problems: for instance, why should a Crown corporation be favourably inclined towards affirmative action hiring programs for women, when these will cut into its profits? Further, laws providing immunity from prosecutions to Crown corporations and giving favourable treatment to them may not be conducive to an influencing role. How can ministers get a given Crown corporation to encourage compliance with policy objectives secondary to those which it was created to pursue? The legal and political "environment" in which Crown corporations currently operate, and its effect on the influencing function, is an aspect of Crown corporation behaviour which must be examined closely, for it may be determinative of the effectiveness of Crown corporations as instruments of influence.

Following this discussion, methods of enhancing the influencing role are put forward. We argue that if the influencing potential is to be effectively exploited, the regime of controls established by legislation must be altered yet again, for as it exists at present this regime addresses itself primarily to control of Crown corporations as commercial entities and not as influencing instruments. Finally, a few brief conclusions are put forward.

To reiterate, it is not the position of this paper that the influencing role of Crown corporations can replace direct regulation. We wish merely to draw attention to its full policy implementation potential, spark further research which will hopefully lead to a better understanding of this potential, and we wish to put forward proposals as to how the influencing role can be enhanced.

Distinctive Policy Implementation Characteristics of Crown Corporations

Numerous authors have, in recent years, commented that Crown corporations can serve as a substitute for, and in some ways possess considerable advantages over, direct regulation. Prichard and Trebilcock, for example, argue that there are functional limitations on direct regulation which do not operate on Crown corporations. Direct regulation relies primarily on legal orders or duties, whether quasi-judicial, statutory or contractual in form.

These

> "... require definition and specification of a private firm's future conduct. As a result, in situations where setting such definitions or specifications is difficult or impossible, direct regulation becomes less effective and public ownership relatively more effective. While Crown corporations also require direction, these directions can be constantly evolving, communicated less formally and openly, stated with less precision..."[3]

The problem of "specification" and "definition" of conduct is one well known to the Canadian Radio-Television and Telecommunications Commission, which is generally acknowledged to have had considerable difficulty in implementing its Canadian content policy (see LRC study on CRTC by John Clifford), because of the difficulty of operationalizing the concept of "Canadian" programming. In contrast, the Canadian Broadcasting Corporation (a Crown corporation) has successfully produced and broadcast a wide variety of predominantly Canadian programs.

Prichard and Trebilcock also point out that the monitoring and information costs associated with direct regulation are relatively high.[4] Regulatees have an obvious incentive to avoid effective regulation by refusing to divulge sufficient information on which to base policy, or by releasing only that information which is in their interests to release. Information gathering costs can be reduced, and the quality of information improved, by "internalizing" the input -- i.e., by entering the market as a Crown corporation, and collecting the information "first hand."

One of the leading rationales for the creation of Petro-Canada, as Larry Pratt has written, was to satisfy the federal government's "need to know" the extent and cost of Canada's northern oil and gas reserves in the wake of the oil crisis of the early 1970s.[5] This was information which the multinational oil companies were unwilling to produce and which, as a result, the National Energy Board was unable to gather.

There are other legal and/or political advantages to use of the Crown corporation instrument over direct regulation. The constitutional division of powers may preclude one level of government from directly regulating a given sector. However, both levels of government are free in law to acquire by purchase the property of a given company, or to create an enterprise which operates outside its legislative competence.[6] Thus, a Crown corporation can be established where a regulatory agency cannot. When the Government of Saskatchewan's pro-rationing of potash production regime was struck down as ultra vires in 1973, the Saskatchewan government created the Potash Corporation of Saskatchewan, and through it controlled the industry as a whole.[7] Alberta's acquisition of Pacific Western Airlines in the mid-1970s can be seen as another example. Similarly, Canadian Crown corporations can operate in the international sphere to influence outside of the jurisdictional authority of either the federal or provincial government.[8] Air Canada, Petro-Canada and Eldorado Nuclear are just three of the many federal Crown corporations competing in the international market.

Crown corporations also have the advantage of being agents of low visibility taxation. As Prichard and Trebilcock explain:

> "By combining in a Crown corporation a set of profitable activities with a set of activities or objectives that are not financially self-sustaining, politicians may be able to realize political advantages through the imposition of a form of tax (cross-subsidization) which has low visibility for the bearers of it (it never appears on the government's books) while at the same time being raised relatively efficiently through 'business-like' management of the tax-bearing resources."[9]

Petro-Canada is again an example. Its acquisition in 1978 of Pacific Petroleum Ltd. gave the national oil company revenue producing assets which it could then use to subsidize high-risk northern exploration.[10]

Crown Corporations as Agents of Influence: Three Methods

The means by which Crown corporations may influence their private counterparts vary with the size and relative power of each. The methods discussed here, in order from least to most coercive, are not available to all corporations at all times in respect of all competitors. Moreover, the distinctions between types of influence -- example-setting, contractual arrangements, and market/price activity -- are not perfect; to illustrate, price cutting is considered a market/price method of influence in this paper, though it could also be characterized as "setting an

example." Following a brief description of how the three methods of influence can or do operate, some limitations on their use are set out.

1. Setting an Example

Crown corporations can serve to encourage the compliance of private firms to government policy by demonstrating the benefits which come with compliance. Where, for example, technologies advocated by a government are proved by Crown corporations to have a positive effect on profits, those technologies may well be adopted by private firms. The same would, we believe, be true in the field of labour relations, standards, market innovations, products and services, and management techniques. In these and other areas, Crown corporations can "lead the way."

The success of example setting as a means of inducing compliance appears dependent upon at least three factors. First, the objective or policy with which compliance is sought must be one which will clearly benefit private firms -- it must, in some manner, operate to increase profits or meet some other goal of the private firm. Government policies which will be of no benefit to the firm, or the benefits of which are not clear, will not likely be complied with voluntarily. Second, the success of example setting depends upon the costs of adopting the example, and not only the profits or the benefits. Where the initial cost of

adopting the example is prohibitive, the promise of long-term profit may not be sufficient to induce compliance. Third, the success of example setting may depend, to some extent, upon the view which private firms have of Crown corporations. Where a given Crown corporation is held in high esteem by its competitors and others for its commercial and technical acumen, then private firms may be more likely, by reason of their confidence in the Crown corporation, to adopt its practices.[11]

These reservations aside, there seems considerable room for Crown corporations to set the pace in many aspects of Canadian industry and commerce. Petro-Canada has been a leader in northern and offshore exploration, forging ahead where the private sector has been more timorous. In terms of adjusting the male-female proportion of workers, again Crown corporations (albeit by force of law, but not law which applies to the private sector) have in many cases been exemplary. To the extent that these and other innovations represent compliance with generally articulated government policy objectives, they provide excellent examples which may be adopted by private firms.

Crown corporations can also set very poor examples, and may at times influence private firms not to comply with government policy or the law. It appears that Eldorado Nuclear and Uranium Canada, for example, played an active role in forming and maintaining a uranium cartel with various private mining companies.[12] While the

cartel may or may not have been created at the behest of one or more ministers, cartels themselves are prohibited under the Combines Investigation Act. Beyond the strict question of legality, it seems clear that the very involvement of Eldorado Nuclear and Uranium Canada may have encouraged private firms to participate in what was, even to a layman's eyes, a highly questionable venture. Panarctic, a subsidiary of Petro-Canada, was recently convicted of pollution offences.[13] Canadian National Railway has been the subject of reprisals from the Canadian Human Rights Commission for its discriminatory hiring practices in relation to women.[14] "Negative" examples such as these may have as pronounced an effect on the conduct of the private sector as do the "positive" examples cited above.

2. By Contract

Beyond setting an example, Crown corporations may also influence private firms contractually, that is, by contracting specific kinds of compliance with specific firms, either directly or by way of public policy "riders" to contracts of procurement, sale, and joint venture. Unfortunately, at this preliminary stage of research, we have not been able to conduct the in-depth level of investigation necessary for a proper appraisal of its potential. Still, we have come across a number of publicly known examples of "contractual" compliance by Crown corporations, and these form the basis of the observations made here.

From the perspective of a Crown corporation, there are two kinds of policy objectives which it might pursue in its contractual relations with private firms -- those objectives which are within or clearly related to its primary policy mandate, and those which fall outside of the mandate. The use of contracts to pursue mandate objectives is not uncommon. It has been reported, for instance, that Petro-Canada was able to use a joint venture agreement to spark a reluctant private corporation into developing certain properties off the East Coast.[15] Controversy arises, however, when one proposes to use Crown corporation contracts as a means of pursuing objectives outside of the primary mandate of a given corporation. Should or can a joint venture agreement between Petro-Canada and Imperial Oil in respect of northern exploration include, for example, a clause requiring Imperial Oil to hire a certain percentage of women or natives?

The reaction of private firms to such clauses is predictable. Compliance inevitably requires the expenditure of time and money by the private contractor. He may choose to avoid these costs by refusing to contract with the Crown corporation, or seek to minimize the cost by demanding more favourable terms in other aspects of the contracts, as compensation. Not every contractual relationship is a proper vehicle for the inclusion of the compliance clause. Much depends on the relative bargaining strength of the parties. Generally, however, so long as the contract as a whole remains sufficiently profitable for the

private firm, it will enter the relationship, and thus bind itself to comply. The issue which arises is how much the government is prepared to give away, in the context of negotiation, to secure inclusion of the clause.

The reaction of Crown corporations to a demand that such clauses be included is perhaps equally predictable -- the corporations usually have nothing to gain financially by such a clause, and indeed may find their freedom of contract considerably limited. They are, therefore, likely to be opposed to such a demand as an unwarranted intrusion into corporate autonomy. Admittedly, a compliance clause is an intrusion, and one likely to be distasteful to the commercial sensibilities of both contracting parties, but it is not unwarranted where the objective with which compliance is sought is an important one, and where the normal flow of contracting is not unduly disturbed. The issue which arises here is who shall decide what objectives are suitable and sufficiently important to justify the inclusion of a compliance clause, and who shall decide when the flow of contracting is unduly disturbed.

There is also a problem of coordination. Matching the compliance interests of the numerous Crown agencies with the compliance possibilities of the Crown corporation's contractual universe is not an easy task. There is at present no mechanism by which these interests and possibilities might be brought together.

3. Market Action

Depending upon the power of a given corporation relative to private firms in the same or related markets, it may be able to act on the market itself in such a way as to affect the costs or profits of those firms, and to thereby induce their compliance to government policy. If the federal government were to decide that oil companies were deriving excessive profits from the retail sale of gasoline, it might require Petro-Canada to reduce its price at the pump by a given amount. If Petro-Canada's access to the retail market was sufficiently large, the effect on its competitors would be immediate -- they too would be required to reduce their prices, thus complying with the government's objective of limiting profits.

Price manipulation can also be undertaken, and may be just as effective. where the objectives sought is a non-market objectives -- i.e., one of social policy. Petro-Canada's pump prices could be reduced not as a means of causing private firms to reduce their prices, though it would have that effect, but as a means of encouraging private firms to meet pollution control standards, hire on an equal opportunity basis, or upgrade safety standards in the industry. Price cutting by the Crown corporation is, in this case, simply a means for inducing compliance, and not an end in itself.

Some may find these forms of "market action" entirely too Orwellian in character. Yet if we are prepared to accept, as we appear to be, that price cutting and analogous strategies are acceptable techniques of competition between private firms in search of commercial objectives, it is difficult to see why we should reject them as tolerable when employed by Crown corporations in pursuit of economic or social policy objectives. It may be true that Crown corporations are not subject to many of the legal and financial constraints of private firms, and that to this extent their use of such techniques is "unfair," but it is also to be remembered that we deal here with questions of public policy and the public interest as it is perceived by a given government. The public character of the objectives sought may go a considerable distance in justifying the means used.

Others may object that market action, and particularly price manipulation, is a rather blunt and uncertain instrument for soliciting private sector compliance. To this there is some truth. Prices can, however, be manipulated in subtle ways. Promotional schemes ranging from giveaways to national coupon discount systems are in effect, price reductions. Interestingly enough, during the summer of 1984, Petro-Canada has launched a new promotional campaign which has the effect of lowering the price of gas at the pumps, its so-called "Petro-dollars" coupon initiative. Unfortunately, the motivation of Petro-Canada in launching this campaign and its effect could not be measured, due to lack of information.

Prices can often be selectively manipulated with regard to region or clientele. Air Canada's use of seat sales serves as an example -- it had the effect of cutting only certain prices for certain routes at certain times of the year. CP Air and others immediately followed suit.[16] Market action may not be as blunt an instrument as it first appears to be.

Crown corporations can also affect the costs of competing -- particularly labour costs. Healthy wage increases for Crown corporation employees could lead to higher wage demands by the employees of private firms, and thereby increase their costs. Conversely, holding the wages of Crown corporation employees steady is likely to place private sector employers in a favourable position vis-à-vis their own unions. Apparently, the application of the Public Sector Compensation Restraint Act ("6 and 5") to Crown corporations allowed private firms to adopt a very strict attitude as regards the wage demands of their employees, and thereby to hold back on cost increases.[17]

There are, of course, some significant problems with market action, not the least of which are the losses which may be incurred by the Crown corporations themselves. Acting on price or labour markets via Crown corporations, whether as a means of pursuing economic or social policy goals, may very well damage their commercial viability.

Limitations on the Influencing Role

General

The foregoing discussion has hopefully provided a general indication of the potential Crown corporations possess as instruments/agents of influence. In this part, aspects of Crown corporations which could detract from realization of this potential are set out. Foremost of these is the position Crown corporations occupy in relation to their private sector counterparts. Does the Crown corporation in question possess legal advantages over private firms? Extra-legal? What market share does the Crown corporation hold? Relations between government and Crown corporations can be determinative of influencing capabilities. How does a Crown corporation ascertain which of the many government policy objectives it should promote, and how much should it promote them? How can directions be given and control be exercised? The position which Crown corporations occupy in relation to the private sector, and the politico-legal relationship between government and Crown corporations can be determinative of influencing capabilities. Both facets are explored below.

Position in Relation to Private Sector

The fact that Crown corporations frequently occupy a "preferred" position when compared to its private sector competitors has both positive and negative consequences, from an influencing perspective. On the positive side, where Crown corporations by force of law are authorized to participate in certain activities, their potential for influence is arguably enhanced. The best illustration of this is probably Petro-Canada, with its automatic "back-in" privileges in relation to oil production on federal lands. Because by law Petro-Canada must be given 25 per cent of oil production, by position alone it will be a force to be reckoned with.

The preferential legal status conferred upon Crown corporations can take other forms as well. Crown corporations, as agents of the Crown, are often immune to prosecutions under certain command-penalty and command-and-control regimes. Thus, for example, Eldorado Nuclear has escaped conviction in relation to the alleged uranium cartel formed in the 1970s.[18] The Administrative Law Project is currently studying the issue of the legal status of the federal administration and hopes to propose some reform in this area soon; in the meantime, however, the "preferred status" accorded to Crown corporations can allow them to provide bad rather than good examples for the private sector.

Any type of preferred status is likely to be a source of resentment within the private sector, and this may in turn decrease the likelihood of influencing occurring. This "resentment" is likely to be further exacerbated in those cases where the Crown corporation in question was created largely from expropriated private firms. It is submitted that even if all actual forms of preferential legal treatment were removed, the resentment held by private sector actors would likely remain. This is because Crown corporations, as an arm of government, would probably be considered preferred regardless of how they behaved. For want of a better phrase, this phenomenon is described here as "the coach's son" syndrome. Essentially, in the eyes of the private sector, a Crown corporation is government, and thus it will always be the target of any anti-government feeling, no matter how ill-founded it might be.

In spite of these perhaps inevitable feelings of ill-will by the private sector, the opportunity for influence can still be great if the Crown corporation in question has by law the right to become involved in private sector operations (i.e., the Petro-Canada back-in example), or holds a significant share of the market. The best illustrations are probably the Saskatchewan Potash Corporation, the CBC, Petro-Canada, and Air Canada, in their respective fields of operation. Also, those Crown corporations who are innovators, no matter what size, stand a good chance of wielding some degree of influence: if a corporation

develops a new lower cost method of extracting natural resources (i.e., Eldorado), reducing pollution, etc., that innovation (and its creator) will be thrust into the limelight and thus into a position of potential influence, regardless of size or stature.

Crown Corporation-Government Relations

The federal government wishes to promote a wide variety of policies, from more equitable hiring practices, to cleaner environments, to more and higher quality Canadian cultural activities and the growth of Canadian industry. Should Crown corporations promote these "secondary" types of objectives, or should they implement only the primary or immediate mandate for which they were created? An obvious initial point of reference is the statute which creates and/or governs the Crown corporation in question. The objects and purposes sections (ss. 6, 7) of Petro-Canada's constitutive act spans some five pages and twenty sub-paragraphs. In spite of its impressive scope and detail, it does not expressly indicate that Petro-Canada shall or may be used as an instrument of influence, nor does it indicate which of the many government objectives it should promote. Nevertheless, the words of its chairman Bill Hopper would seem to indicate recognition and application of this influencing role.[19] While a specific subsection requires Petro-Canada to comply with policy directions given to it by the Governor-in-Council, it would appear that an express provision authorizing use of the corporation as an

instrument of influence and indicating some priority of policies to be promoted might clarify its influencing role. A survey of statutes governing the activities of other Crown corporations reveals a similar silence on matters of influencing roles, and priorities of policies to promote.[20] The activities of various Crown corporations in recent years would appear to indicate lack of consensus among management as to whether they consider setting examples and private sector influence to be important objectives for Crown corporations to pursue.[21] Interviews with management of major Crown corporations, inquiring as to their attitudes towards Crown corporations qua instruments of influence, would shed further light on this issue.

Control of Influencing Usage of Crown Corporations

Our purpose in previous sections has been to suggest that the capacity of Crown corporations as policy instruments has not been fully exploited. The Crown corporation may be a more useful and flexible tool than we have appreciated, especially in terms of influencing the conduct of private firms. Beyond the task of recognizing such potential usage is the task of coming to grips with its control.

Existing methods of "direction" and "accountability" go primarily to Crown corporations as financial or commercial entities. This is true even of Bill C-24, as recently enacted.[22]

Division III of that Bill provides a fairly exhaustive framework of controls over the financial activities of Crown corporations. These do not, however, speak to the control of Crown corporations as policy instruments -- i.e., as agents of influence in respect of private firms. What influences are to be exerted? For what objectives? Among what constituencies? By what methods? With what trade-offs? The budgeting, reporting and planning requirements of Division III do not provide a way of answering these questions.

The directives power created under s. 99(2) of the Bill might be of some use in the exploitation and control of the influencing potential of Crown corporations. That power is, however, highly formalized and thus unwieldy.[23] Further, while there is no real question as to whether a directive is legally binding upon a director or officer, there is a question of whether a legally binding directive is binding in practice. A given corporation may undertake to meet a legal criterion of compliance with a directive without undertaking real or substantive compliance. Finally, Crown corporations may become directive dependent -- that is, they may abstain from pursuing public policy goals unless required to do so by directive.[24] The directives power may, in sum, prove to be an insufficient method of attaining policy control over the Crown corporations.

Other methods of policy control exist, and these might be used to exploit and direct the influencing potential of Crown corporations. The government might, for example, exercise its appointment power to corporate boards in an effort to secure policy control,[25] or it may seek such control through the regulatory agencies to which the Crown corporations are subject. At best, however, these are indirect and haphazard methods. If the instrumental or influential capacity of Crown corporations is to be more fully realized, the federal government must develop a more effective and pro-active system of control over Crown corporation policy. Such a system must be able to answer the essentially political questions posed above.

Two prototype systems exist -- that which functioned in Saskatchewan in the mid and later 1970s, and that embodied by the federal Canada Development Investment Corporation (CDIC). Both rely on central holding corporations with extensive powers of financial and policy control over the corporations for which they are responsible. In Saskatchewan's case, the Crown Investments Corporation (CIC) exercises direct responsibility for most provincial Crown corporations. At the federal level, the CDIC has responsibility for only a small number of Crown corporations -- notably Canadair, De Havilland, and Eldorado Nuclear -- as well as certain government investments in companies such as Massey Ferguson and Teleglobe.[26] While CDIC's range of control over public enterprise is far less than that of CIC, both are motivated

primarily by concerns for commercial, managerial and financial efficiency. Neither has an express mandate to use controls over the corporations in their portfolio to influence private firms.

Saskatchewan's system is distinguished by its considerable political sensitivity. No elected federal politicians sit on CDIC's board, nor on the board of any federal Crown corporation whether controlled by CDIC or not. The primary method of political influence on CDIC remains the directive and appointment powers. CIC's board, on the other hand, was, in the period under discussion, composed entirely of ministers of the provincial government; further, each minister on CIC's board was also chairman of one or more of the corporations falling under CIC's control. The CIC board was, in effect, the Cabinet Committee on Crown Corporations -- through it, and through the device of ministerial chairmanship, the provincial cabinet was in a position to exert a profound and very direct influence on corporate policy.[27]

There is no evidence that Saskatchewan has used its Crown corporations to influence private firms to any greater degree than other governments. Its system of direct ministerial control did, however, provide an opportunity for non-commercial interests and objectives to be brought to the fore of the corporate policy-making process. It also brought into that process individuals who were well acquainted with the variety of government objectives:

those persons had much of the knowledge and responsibility for deciding political questions. Further, CIC's board, being in effect the Cabinet Committee on Crown Corporations, provided a forum for reconciling the influencing possibilities offered by Crown corporations with the compliance demands of the whole range of government agencies.

While the Saskatchewan scheme lends itself to better exploitation and control of the influencing role of Crown corporations, there are additional reforms which might be considered. A CIC-like central agency created at the federal level (or an expanded CDIC), could be responsible not only for overseeing the commercial, managerial and financial efficiency of individual Crown corporations, but could also exercise direct responsibility for conceiving, developing and operationalizing the influencing possibilities of Crown corporations. Further, there might be created within each Crown corporation a unit of specialists who could identify and explore the compliance-related possibilities offered by the activities of their corporations, and liaise with the central agency.

Conclusions

The primary purpose of this paper has been to "raise consciousness," to make persons more aware of the private sector influencing potential of Crown corporations. The very preliminary

research which underlies this paper appears to indicate that Crown corporations are influencing private sector behaviour, although this influence may often be unintended and/or negative (e.g., the setting of bad examples).

There are many problems associated with this influencing potential: how can its use be structured? Which primary and which secondary goals should Crown corporations seek to promote? To what extent? Will this unduly affect the viability or profitability of the Crown corporation? What is the public perception of this influencing use? As methods of inducing private sector compliance, are the functions of Crown corporations too unpredictable?

Before an intelligent assessment of this influencing potential can be made, more research is necessary. We suggest that a survey of Crown corporation management be undertaken, in an effort to determine current awareness of the influencing usage, its problems and strengths. It would also be educational to research the behaviour of regulators with respect to Crown corporations: are regulators reluctant to prosecute Crown corporations, knowing that such actions are fraught with legal and political obstacles? Generally, what are the relations between regulators and Crown corporations? Can they be better coordinated? And how does the private sector react to the influence capabilities of Crown corporations? Is this type of policy implementation considered less or more intrusive/desirable than the traditional means?

Footnotes

1. Studies completed to date include: J. Clifford, Content Regulation in Private FM Radio and Television Broadcasting: A Background Study about C.R.T.C. Sanctions and Compliance Strategy (1983); K. Webb, Industrial Water Pollution Control and the Environmental Protection Service (1983); H. Eddy, Sanctions, Compliance Policy and Administrative Law (1981); R. Dagenais, Aviation Safety in Canada: A Case Study on Compliance in the Canadian Air Transportation Administration (1983); T. Laberge, Le conformisme et les droits de la personne au Canada (1983,/; B.J. Barton, R. Franson, and A.R. Thompson, A Contract Model for Pollution Control (1983). For further information concerning these and other studies, contact the Administrative Law Project of the Law Reform Commission of Canada.

2. R.F. Cranston, "Regulation and Deregulation: General Issues," U.N.S.W. Law Journal, Vol. 5, 1982, p. 20.

3. J.R.S. Prichard and M.J. Trebilcock, "Crown Corporations: The Calculus of Instrument Choice," in J.R.S. Prichard (ed.), Crown Corporations in Canada (Toronto: Butterworth, 1983), p. 31.

4. Ibid., pp. 26-8.

5. Larry Pratt, "Petro-Canada," in Allen Tupper and B. Bruce Doern (eds.), Public Corporations and Public Policy in Canada (Montreal: Institute for Research on Public Policy, 1981), pp. 104-6.

6. Prichard and Trebilcock, op. cit., p. 30. See also Patrice Garant, Les Sociétés d'État: Instruments d'Intervention Économique, Aspects Juridiques (a study prepared for the Royal Commission on Economic Union, 1984) p. 13.

7. Saskatoon Star Phoenix, 24 February, 1982, p. c.1.

8. See, for example, "Major U.S. airlines slash discount fares to match Air Canada," Ottawa Citizen, 26 January, 1983, p. 23.

9. Prichard and Trebilcock, op. cit., p. 32.

10. Pratt, op. cit., pp. 136-7.

11. Interview with Mr. Finlayson, Research Director (Ottawa: Business Council on National Issues), 4 July, 1984.

12. R. v. Eldorado Nuclear, S.C.L. (1983).

13. "Anti-pollution group wins fight as court fines Panarctic Oil Ltd.," Ottawa Citizen, 19 January, 1983.

14. See, generally, Laberge study of CHRC.

15. "Petro-Canada finds Mobil too slow," Toronto Globe and Mail, 25 June, 1984; "Petro-Canada mulls over alternatives as it waits for election outcome," Toronto Globe and Mail, 20 August, 1984; "Petro-Canada, Mobil pact on East Coast farm-in seen to be imminent," Toronto Globe and Mail, 12 June, 1984.

16. E. Clifford, "Air Canada cuts fares up to 75%," Toronto Globe and Mail, 20 January, 1983, p. 132, and "Major U.S. airlines slash discount fares to match Air Canada," Ottawa Citizen, 26 January, 1983, p. 23.

17. Finlayson Interview, op. cit.

18. Eldorado Nuclear has successfully avoided combines prosecutions on grounds of Crown immunity. See R. v. Eldorado Nuclear, op. cit.

19. "Petro-Canada mulls over alternatives as it waits for election outcome," op. cit. The Globe and Mail reports Mr. Hopper as saying ...

> "... Petro-Canada got involved in a variety of exploration plays in the mid-1970s when other companies were pulling out of the frontiers, especially the East Coast.
>
> We tried to act as a catalyst to keep others in the game. And our efforts have paid off. Significant discoveries have been made and many companies are actually involved in East Coast exploration."

20. For instance, see Air Canada Act 1977, S.C. 1977-78, c. 5; Canadian Radio-Television and Telecommunication Commission (sections on CBC), S.C. 1974-75-76, c. 49, as amended.

21. On the one hand, it could be argued that CBC, Panarctic, and the CNR are setting bad examples (obscenity, pollution, and unfair hiring practices respectively), while on the other hand, Petro-Canada is ostensibly trying to set an example as a leading explorer on northern and offshore lands.

22. "An act to amend the Financial Administration Act in relation to Crown Corporations and to amend other Acts in consequence thereof," as passed by the House of Commons, 28 June, 1984.

23. See, for example, ss. 99(4) and 99(6).

24. Interview with Don Gracey, Toronto, 18 July, 1981.

25. See, in this connection, John Langford, "Crown Corporations as Instruments of Policy," in G.B. Doern and Peter Aucouin (eds.), Public Policy in Canada (Toronto: MacMillan, 1979).

26. Canadian Government Programs and Services (Don Mills, Ontario: CCH Canadian Ltd.) pp. 5101-3.

27. On this topic, see Gordon W. MacLean, Public Enterprise in Saskatchewan (Regina: Crown Investments Corporation, 1981).

Administrative Law Project Research Concerning Policy Implementation

B.J. Barton R. Franson A.R. Thompson	--	A Contract Model For Pollution Control
J. Clifford	--	Content Regulation in Private FM Radio and Television Broadcasting: A Background Study about C.R.T.C. Sanctions and Compliance Strategy
R. Dagenais	--	Aviation Safety in Canada: A Case Study on Compliance in the Canadian Air Transportation Administration
C. Dunning	--	Compliance Through the Economic And Regulatory Methodologies
	--	Compliance and Administrative Law: Costs of Compliance
H. Eddy	--	Sanctions, Compliance Policy and Administrative Law
T. Laberge	--	Le conformisme et les droits de la personne au Canada
*D. Lillico	--	Compliance and the Canadian Film Development Corporation
A. Lucas	--	The Sanctions Process of the Northern Pipeline Agency: Powers, Policy, Procedures
R. Nadeau	--	Compliance and Enforcement in Customs and Excise
K. Webb	--	Industrial Water Pollution Control And The Environmental Protection Service

* Work in progress

PUBLIC ENTERPRISE, NATURAL MARKET STRUCTURE, AND ENTRY

by

Roger Ware
Department of Economics
University of Toronto

RÉSUMÉ

Les récents progrès de la technologie ont remis en question le statut de bon nombre d'industries qui sont des " monopoles naturels ", comme les télécommunications, le service postal et certaines entreprises d'utilité publique. Le présent document traite de l'équilibre de ces structures transitoires de marché, dans les cas surtout où l'un des organismes en cause est une société publique. L'auteur montre que, s'il s'agit d'un marché de monopole naturel, l'entreprise monopolistique peut décider de rendre ce marché inaccessible pour les autres, en ce sens qu'au lieu d'en empêcher l'accès à ses concurrents, comme cela lui serait possible, elle choisit plutôt de leur ménager des conditions inacceptables. D'autre part, si c'est un duopole qui se trouve à constituer la structure de marché efficace, une entreprise publique monopolistique peut alors ne pas être en mesure d'attirer, de façon crédible, la concurrence, parce qu'elle a l'obligation de maximiser le surplus total plutôt que le surplus privé. Diverses options sont étudiées quant aux politiques pertinentes, y compris la privatisation d'une entreprise publique monopolistique et l'acquisition, en propriété publique, d'un monopole privé.

ABSTRACT

Recent advances in technology have called into question the status of many traditional "Natural Monopoly" industries, such as telecommunications, mail service and some utilities. This paper examines market equilibria for these transitional market structures, particularly where one of the firms involved is a public enterprise. It is shown that, in a Natural Monopoly market, a case of voluntary non-sustainability may occur, in which the incumbent is able to deter entry but chooses instead a strategy of "Destructive Accommodation." Second, if the efficient market structure is a duopoly, an incumbent public monopolist may be unable to credibly induce entry, because of its commitment to maximizing total rather than private surplus. Various policy options are investigated, including the privatization of an incumbent public firm, and the acquisition into public ownership of a private monopoly.

1. INTRODUCTION

The study of public enterprise within public economics has focussed primarily on one case, that of classic Natural Monopoly in which the market is served by a single firm. The basic rationale is that economies of scale are sufficiently great that it is socially desirable to have only one firm in the industry. In many countries, however, this is not the dominant form of market structure in which we find public enterprise. In particular, a market structure which is frequently observed is a public firm which competes with privately owned firms engaged in principally the same activities. In Canada, for example, this type of public enterprise in the form of Crown corporations is qualitatively far more significant than the pure Natural Monopoly case. Prominent examples in Canada include Petrocan, Air Canada, CN, and to some extent the Post Office, which is finding itself increasingly competing with private delivery services. As an intermediate case, Bell Canada is an example of a regulated Natural Monopoly that may face increasing competition from private telecommunications services. Examples of these mixed market industries are also very common in European countries, to an extent too numerous to list.

There has been a recent growth of research interest in the theory of government enterprise in mixed markets. Harris and Wiens (1980) produced one of the earliest formal models of mixed market equilibrium, in which they showed that it is possible for a

single public firm to "discipline" the performance of an otherwise private oligopoly, under their assumptions even to the extent of restoring first best allocative efficiency. Beato and Mas-Collel (1983) studied a similar model and refined the game theoretic foundations. Ware and Winter (1984) have looked at the implications of private market rivalry for the Ramsey Pricing rules developed for a profit constrained public firm.

None of these studies has considered the issue of entry conditions in markets occupied by public firms. Is the presence of a public firm likely to facilitate entry or impede it? Which is more desirable? The theory of strategic entry barriers, as developed recently by Eaton and Lipsey (1979), Dixit (1980), Ware (1984a) and others, provides a natural framework for such an analysis, which is the subject of this paper.

Related to the new positive theories of market structure is the normative issue of the most efficient market structure implied by a given technology and demand conditions. Industries that were once regarded as Natural Monopolies, such as telecommunications, mail service, and some utilities, have undergone dramatic changes in their production technologies, and in the availability of substitutes. However, little analysis has been directed towards reassessing the role of the regulated or publicly owned incumbent firms in such industries. Is there a role for new private entry as the efficient number of firms increases? Indeed, does the usefulness of the public firm itself die with the Natural Monopoly

phase of the industry; and is privatization of the government enterprise the best policy response to non-monopoly natural market structures?

In this paper we carefully develop a conceptual framework of "natural" market structure with which to conduct our analysis. We start with a rigorous definition of the sometimes vague concept of Natural Monopoly, and define an analogous concept for Natural Duopoly, and so on. These concepts, which take account of both cost and demand conditions, can be defined in both a first-best and second-best sense, the latter implying a need for firms to meet break-even constraints. Given that many government enterprises operate in industries where they are the sole supplier or one of a small number of suppliers, the conceptual framework of natural market structure has wider applications outside the issue of entry conditions and efficiency, which is the main focus of this paper.

In models of market equilibrium, the mixed market structure is unusual in that public and private firms are maximizing different objective functions. This can lead to some counter-intuitive equilibria: for example, public firm follower equilibria are often welfare superior to public firm leader equilibria.[1] Moreover, it is the public firm's credible commitment to marginal cost pricing that can bring about the state of Unnatural Monopoly described in section 3 of the paper.

Another interesting aspect of the problem which is treated here is strategic behaviour towards entry. In recent years, there has been active research interest in ways in which an incumbent firm can credibly deter entry by sinking part of its costs "up front." In the model presented here, the incumbent firm can commit capacity before entry takes place, thus influencing the equilibrium of the post-entry game. Simple expositions of this approach can be found in Dixit (1980), Eaton and Eswaran (1984), Ware (1984a).

The types of natural market structure studied here are those of Natural Monopoly and Natural Duopoly. The results can be classified according to this division, and according to whether entry of a second firm either takes place or is deterred. First, suppose that a single private incumbent serves a Natural Monopoly market. The first result, labelled "Destructive Accommodation," shows that the incumbent may choose to allow entry even though it is capable of deterring it. The result can be contrasted with those of the literature on sustainability of Natural Monopoly (Panzar and Willig (1977)) where an incumbent public firm is unable to prevent entry into a Natural Monopoly market. Thus, the Destructive Accommodation result is a kind of voluntary non-sustainability. A second proposition shows that the sense in which this is inefficient is that an entry tax can always be found which both deters entry and improves welfare.

Second, if a market becomes a Natural Duopoly, almost the opposite case can occur, where entry is now desirable but may not be feasible. Thus, the incumbent firm may be unable to credibly induce entry, because of its commitment to maximizing total rather than private surplus. The market is stuck in a situation described as "Unnatural Monopoly." A further result shows that markets served by an incumbent public firm, which evolve from Natural Monopoly to Natural Duopoly, always pass through a period of Unnatural Monopoly.

The format of the remainder of the paper is as follows. The concept of natural market structure which is applied here is described in the next section. Section 3 discusses the model in detail, and section 4 summarizes the results. The final section draws conclusions.

2. "NATURAL" MARKET STRUCTURE

Given a particular cost and demand structure for an industry, the efficient number of firms can always be derived -- the number that a planner would choose. This is a trivial problem with globally increasing returns, but with decreasing returns technologies, the solution requires some analysis. The planning approach should be distinguished from recent work on "natural" market equilibrium structures, which derive the number of firms in a competitive market with free entry (for work on this important but distinct research program, see Shaked and Sutton (1983), Eaton and Ware (1984)).

The most familiar, although not necessarily the most precise, concept of natural market structure is that of Natural Monopoly. The concept of Natural Monopoly has undergone considerable refinement at Bell Laboratories (Sharkey (1983) is a good summary of this work), but the interaction between technology and demand has not been adequately analyzed. Sharkey defines a Natural Monopoly as an industry with a sub-additive cost function,[2] but a better definition would incorporate a role for demand. For example, a cost function of the form shown in Figure 1 is clearly not sub-additive, but if demand is not too large, as illustrated, the industry will be a Natural Monopoly.

The two concepts of natural market structure employed in this paper are discussed briefly in Harris (1981a). The <u>first best</u>

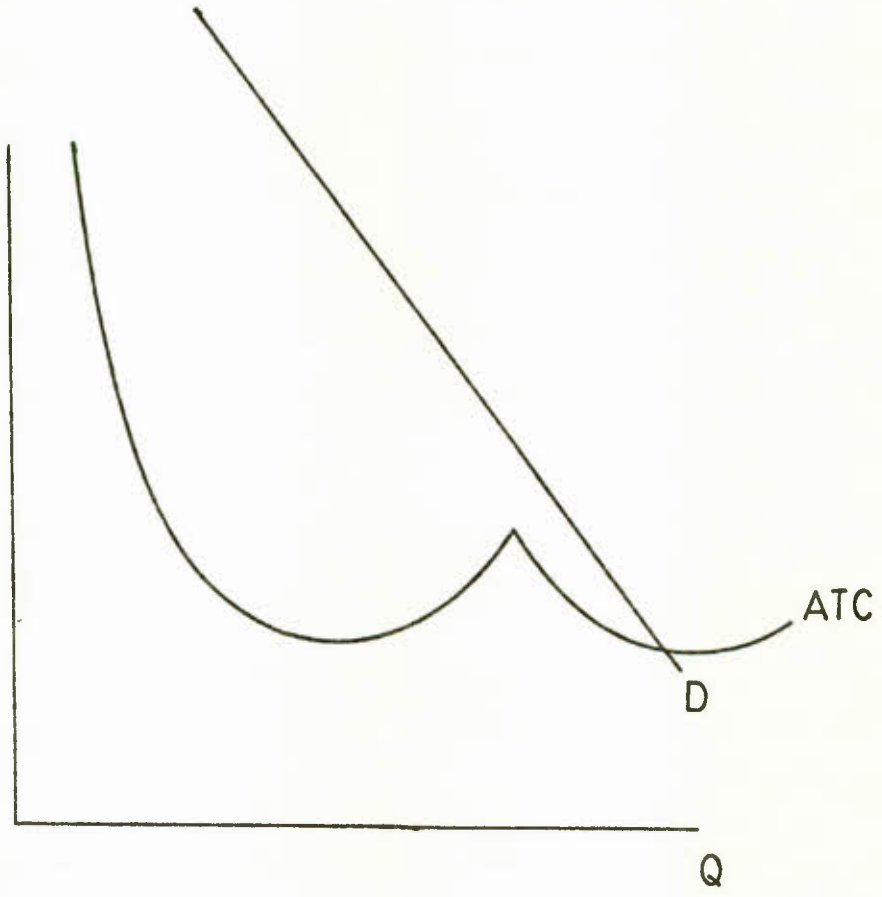

FIGURE 1

concept defines the optimal number of firms as that number for which maximized net surplus is largest (with a corresponding definition of Natural Monopoly where maximized net surplus is largest for one firm). The only way to verify this for given cost and demand conditions is to calculate maximized net surplus with one firm, then with two firms, and see which is larger. If demand is growing, there will be a transition in the natural market structure at some point, from Natural Monopoly to Natural Duopoly.

The first best concept puts no break-even constraint on firms in comparing values of maximized net surplus. Such a break-even constraint may be desirable, however, because public enterprises are usually required to break even. Moreover, in the kind of public/private entry game explored in this paper, the knowledge of a break-even constraint on the public firm is available to its private rival, and if binding, the constraint will influence the equilibrium to the game. Thus, we also define a second-best concept of natural market structure, such that the optimal number of firms is that number for which maximized net surplus <u>subject to a break-even constraint</u>, is largest.[3]

3. THE MODEL

It has been proposed by Dixit (1980) and others that an incumbent firm may be able to alter the conditions facing potential entrants by precommitting itself in some way so as to influence the payoffs in the post-entry equilibrium. This procedure can be formalized as a two-stage game:[4] in the first stage, the incumbent chooses a level of some precommitment variable; and in the second stage payoffs to both firms are determined by an equilibrium in which neither side has a strategic advantage.

A two-stage model of this type, with one incumbent and one potential entrant, is used to obtain the results of this paper. The incumbent has a strategic advantage in being able to commit capacity before entry, which has the effect of shifting its own reaction function so as to influence the post-entry game.

Demand is assumed linear, given by

$$P = D(Q) = a - Q \tag{1}$$

where Q = total industry output.

Costs for all firms are identical and given by

$$C_i = (1/2)\, cq_i^2 + rk_i + F_i \tag{2}$$

where q_i, k_i are quantity and capacity of firm i and $q_i \leq k_i$. Let subscript 1 indicate the private firm, 2 the public firm. The objective functions of the two firms are, respectively:

$$\pi_1 = D(q_1 + q_2)\, q_1 - C_1 \tag{3}$$

$$W_2 = \int_0^{q_2} D(q_1+s)ds - C_2 - C_1 \tag{4}$$

By maximizing each of these expressions, holding the other firm's output constant, full cost reaction functions for the two firms can be derived, where capacity and variable costs are expended simultaneously. The reaction functions are depicted in Figure 2. Whichever is the incumbent firm has the opportunity to commit capacity prior to entry, if entry takes place. Within the range of committed capacity, output for this firm will then vary along a variable cost reaction function in the post-entry game. Variable cost reaction functions for the two firms can also be derived, and are shown in Figure 2. The reaction function of the incumbent is "kinked" at the level of precommitted capacity, and it continues along the full cost reaction function for higher capacity levels. A representative reaction function for the private firm is illustrated as XYZS in the figure, corresponding to the level of installed capacity $\underline{K}_1$. Thus, by strategic choice of capacity, a private incumbent firm could bring about an entry equilibrium anywhere on QU, whereas a public incumbent could induce an

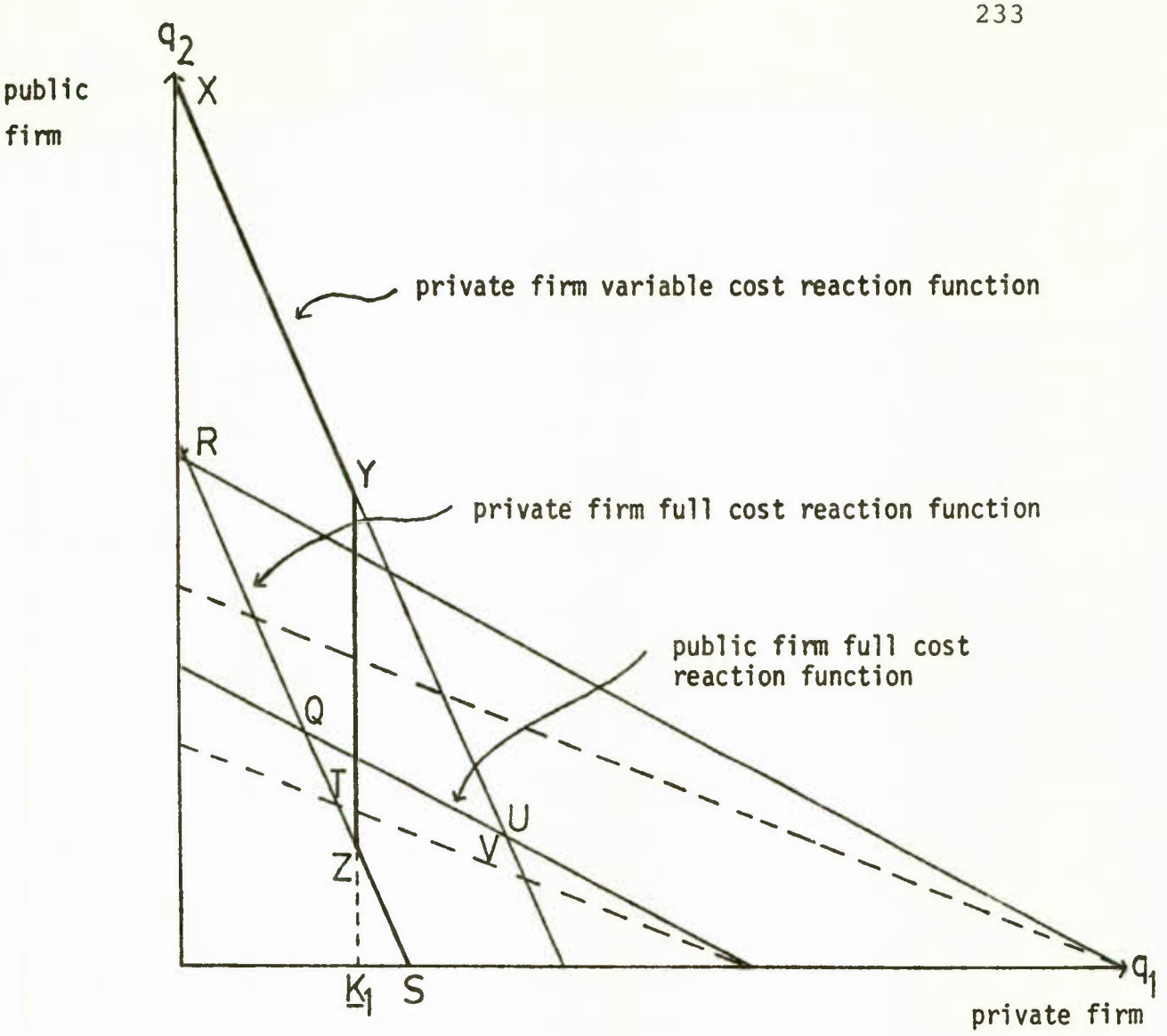

FIGURE 2: Full and variable cost reaction functions for a public/private firm duopoly

equilibrium anywhere on QR. To complete the picture, if both firms were private, firm 1 as incumbent could induce an entry equilibrium along TV (this is the Dixit case). Moreover, these same segments QU, QR, and TV, define the regions of credible entry deterrence for the respective incumbents. That is, only by building capacity within these limits will the capacity actually be used in the perfect equilibrium of the entry game.

4. RESULTS

The results are only summarized here without formal derivation. The interested reader is referred to a companion paper "Unnatural Monopoly and Destructive Accommodation: A Model of Public Enterprise with Entry," for the formal analytics.

4.1 Natural Monopoly

It is possible that a public firm in a Natural Monopoly market will be faced with a choice between strategically deterring entry by holding more than the first-best capacity, or allowing entry in which case the industry would contain the "wrong" number of firms. If welfare in the two cases could be directly computed, the choice could be made on this basis.

The second of the above choices involves deliberate accommodation of entry into a Natural Monopoly market. This is also possible for a private incumbent firm. Deterring entry may involve sufficient expenditure on excess capacity that accommodating the entrant, and sharing duopoly profits, can be preferable for the incumbent. In this case, which is termed Destructive Accommodation, the incumbent will allow entry even though the market is a Natural Monopoly, and entry can be deterred.

In what sense is this inefficient? Although it is tempting to just compare welfare before and after the "destructive" entry,

only the latter is a market equilibrium, so the comparison makes no sense. A meaningful comparison must look at the welfare implications of some policy instrument which can shift the equilibrium to a strategy of deterrence. It can be shown that, in an industry subject to Destructive Accommodation, there always exists a lump-sum entry tax which encourages deterrence and improves welfare. The tax works by lowering the projected post-entry profits of the entrant for any given choice of capacity by the incumbent; which, in turn, makes deterrence cheaper and hence more profitable for the incumbent. Finally, the cost in terms of allocative efficiency of giving the monopolist an artificial entry barrier is outweighed by the benefit of having the "right" number of firms. Note also that the entry tax is not paid, since entry is deterred.

It is interesting to consider whether entry of a public firm poses a greater or lesser threat to a private incumbent than would private entry. One might expect that an incumbent monopolist would be more reluctant to allow public entry, because in the ensuing post-entry game, the public firm will claim a larger market share by marginal cost pricing. (Recall that we are concerned here with entry of de novo public firms -- nationalization of existing firms is treated separately below.) This intuition is correct: entry by a public firm will always be deterred, if it can be. Note also that the public firm will only come in (into a Natural Monopoly market) if such entry would be welfare improving.

4.2 Natural Duopoly

As demand grows, a market which is initially a Natural Monopoly will at some point become a Natural Duopoly. This point is characterized by a level of demand such that maximized surplus (constrained maximized surplus for second-best Natural Duopoly) is the same for either one or two firms. Once this point is reached, of course, it is socially desirable for entry to take place, since the efficient number of firms is now two.

Suppose the industry is currently served by a public firm. The entry conditions for a private entrant are illustrated in Figure 3. By strategic choice of capacity, the incumbent public firm can bring about any output combination on QR that implies non-negative profits for the entrant. A possible zero profit contour for firm 1 (the private potential entrant) is as shown in Figure.[5] Although the industry is now a Natural Duopoly, entry cannot occur because the entrant anticipates negative profits given its small post-entry market share. In effect, the public enterprise's commitment to maximizing total net surplus forces it to claim a large share of the market by marginal cost pricing.

Thus, in a Natural Duopoly market, it is possible that an incumbent public monopoly cannot credibly induce private entry. This situation is described as "Unnatural Monopoly." It has been suggested recently that the introduction of microwave and

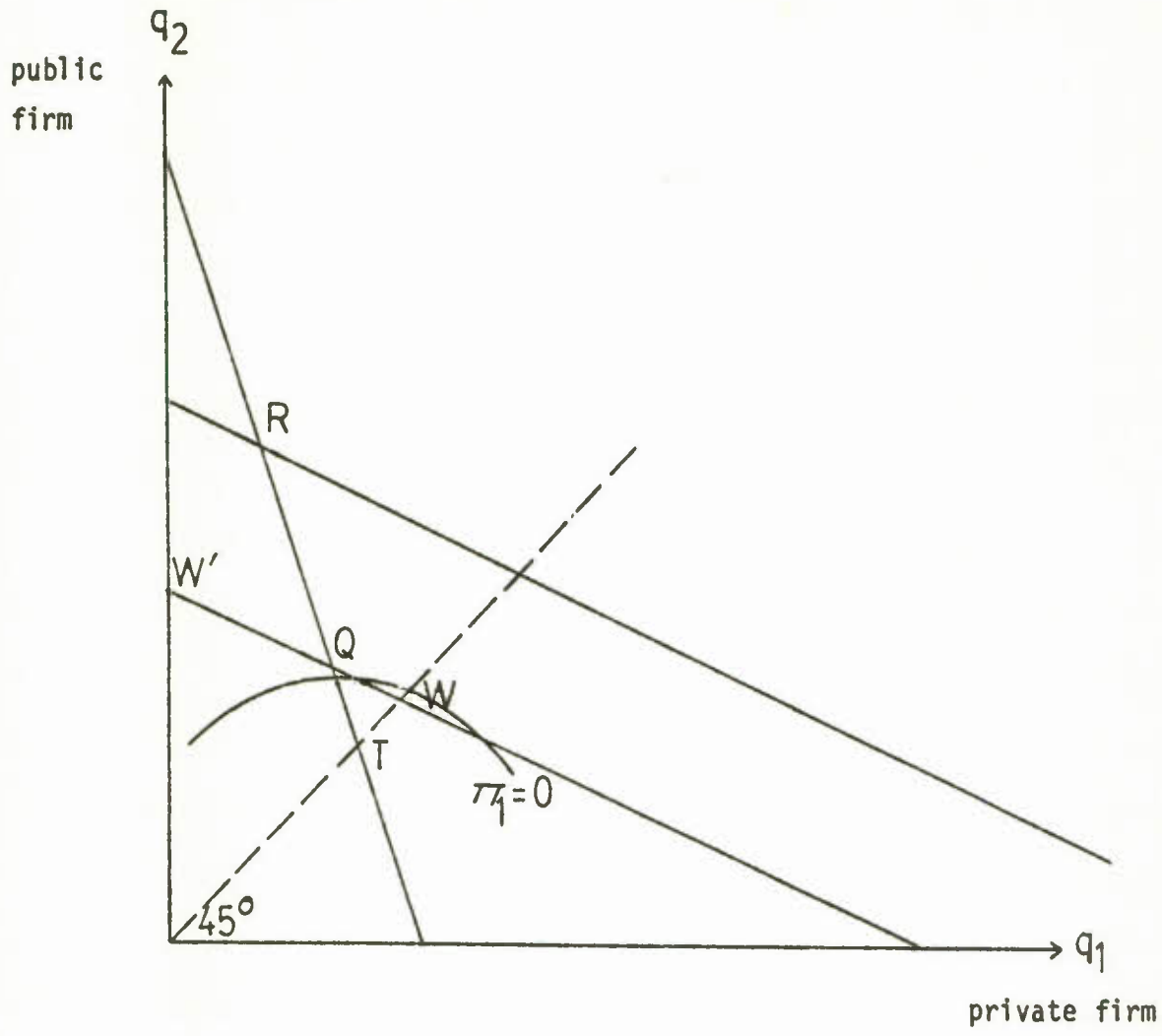

FIGURE 3: The entry game for a private entrant and public incumbent

satellite communications has shifted the technology of telecommunications such that the industry is no longer a Natural Monopoly. The same doubt exists for mail service and air transport, which was once widely perceived as a Natural Monopoly. The Unnatural Monopoly result demonstrates that this kind of transition from one natural market structure to another can cause problems in the presence of public firms. It is important, therefore, to know whether Unnatural Monopoly is just a curiosity, or whether its occurrence would be common in industries with a changing natural structure. It can be established that, in the given model, there always exists an interval of market size corresponding to Unnatural Monopoly. That is, if the market grows continuously, it will always pass through a period of Unnatural Monopoly.[6]

Monopoly can also occur in a Natural Duopoly market if the incumbent firm is privately owned. For a public incumbent, the issue is that entry is desirable but is not feasible. With a private monopolist, entry accommodation may be feasible, but the incumbent firm may choose to strategically deter entry. Once again the industry is in equilibrium with the wrong number of firms.

Suppose that the incumbent monopolist is again a private firm but that now the government is considering entering the industry with a public firm. Strategic deterrence can occur in the same way as in the previous case, and the industry may be in

equilibrium with one firm. One difference, however, is that the public firm's entry threat is only credible where entry would be welfare improving. If this is not the case, public entry is effectively blockaded, and the private incumbent can choose the monopoly quantity.

4.3 A Comparison of Ownership Regimes for a Given Market Structure

We are now in a position to address a question which arose earlier: What would be the effect of a change in ownership on the kinds of phenomena we have been analyzing? Suppose, for example, we have a public incumbent firm caught in a state of Unnatural Monopoly, what would be the effect of privatization? The answer depends, first of all, on whether entry occurs after privatization. If it does not, welfare can only decrease, since the private incumbent will choose to set a monopoly quantity. Even if entry does occur, there is a trade-off between inefficient pricing (from the resulting duopoly) and the "right" number of firms, and welfare may increase or decrease.

Consider the opposite case, of a private monopoly incumbent in a Natural Duopoly market, i.e., private Unnatural Monopoly. We now ask whether nationalization of the private firm would increase welfare. Not surprisingly, it can be shown that welfare can never decrease from this move. Essentially, either the market continues as a monopoly, but with the public firm setting a more efficient

quantity; or entry will be permitted, but only if this improves welfare. There is an interesting corollary to this result, that if the public firm chooses to strategically deter entry, the number of firms, price and welfare will remain unchanged. In other words, under the threat of entry, nationalization has no effect on the industry at all, despite the different objective function of the public firm.

5. CONCLUSIONS

The rapidly changing cost structure of many industries has provoked concern that the traditional Natural Monopoly justification for a Crown corporation or a regulated monopoly may no longer be applicable. However, a transition to a new efficient market configuration may be complicated by the strategic structure of the industry, and by the fact that public firms and private firms are pursuing different goals. Thus, we have shown that a state of "Unnatural Monopoly" may occur, such that the efficient market structure is a duopoly, but the incumbent public enterprise is unable to credibly induce entry, because of its commitment to maximizing total rather than private surplus.

Second, even if the market remains a Natural Monopoly, a private incumbent firm may choose a strategy of "Destructive Accommodation," allowing entry even though it is capable of deterring it.

We examine the effect of changes in ownership -- privatization or nationalization -- on industries caught in these inefficient states. Privatization of a public incumbent firm will only improve welfare if it induces entry, and even then the allocative inefficiency of the resulting duopoly may dominate any overall increase in output. In the opposite case of Destructive Accommodation, nationalization does improve welfare, because a public incumbent will only permit entry that is welfare increasing.

Notes

1. See Harris (1981b), Bos (1981) and Beato and Mas-Colell (1983) for discussions of this issue and others pertaining to mixed market equilibria.

2. Sub-additivity requires that any subdivision of an output vector produced by one firm cannot be produced more cheaply by several firms.

3. "Second best" is used here in a partial equilibrium sense, in that we are not concerned with interactions in other markets.

4. The two-stage game as proposed by Dixit can be further refined. See Ware (1984a).

5. With first-best Natural Duopoly, the zero profit contour can pass above or below the point W. With second-best Natural Duopoly, it must pass above the point W. See Harris (1981a).

6. See Ware (1984b), p. 11.

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GOVERNMENT ENTERPRISE IN COMPETITIVE MARKETS

by

R. Kent Weaver
The Brookings Institution
and
Centre of Canadian Studies
School of Advanced International Studies
The John Hopkins University

RÉSUMÉ

De plus en plus, les entreprises publiques sont actives dans des marchés où elles entrent en concurrence directe avec des sociétés privées. Les entreprises publiques peuvent s'adapter à cette situation de concurrence de plusieurs façons, notamment par l'adoption du comportement de leurs compétiteurs, la formation d'un cartel avec ces derniers, l'utilisation de ses ressources pour forcer les concurrents privés à modifier leurs activités conformément aux objectifs du gouvernement, ou la spécialisation dans un sous-marché spécifique sans égard à la rentabilité commerciale. Les options prises par les dirigeants de telle ou telle entreprise publique dépendent à la fois de la structure du marché concerné et des contraintes d'ordre financier et hiérarchique qu'impose à l'entreprise particulière le gouvernement propriétaire.

ABSTRACT

Public enterprises are increasingly functioning in markets where they compete directly with private sector firms. Public sector firms can adapt to this competition in several ways, notably imitation of the behaviour of their private sector rivals, formation of a cartel with those firms, use of its resources to compel private sector competitors to modify their behaviour in a direction with government objectives, or specialization in a specific market niche regardless of its commercial viability. The choice made by public enterprise managers among these options will reflect both the structure of the markets in which public firms are operating and the financial and command structure constraints imposed on individual firms by their owner-governments.

In the early years of public enteprise activity in Canada, Crown corporations functioned primarily in markets where they either held a monopoly or where most forms of competition were highly regulated. The various Hydro authorities are examples of the former, Canadian National Railways, Trans-Canada Airlines (now Air Canada) and the Canadian Broadcasting Corporation of the latter. Increasingly, however, government-owned firms in Canada and elsewhere are operating in highly competitive markets.

This has occurred for a variety of reasons. Governments are increasingly taking over firms in industries outside the traditional infrastructure (transport, power, communications) sectors, producing such diverse products as aircraft, steel, nuclear power plants, gasoline and fish products. Second, government regulation of competition in some industries -- e.g., airlines, railways, telecommunications -- has been explicitly relaxed and/or eroded by changing market conditions.

This public-private competition has prompted protest from both sides: private sector firms complain that their government-owned competitors have unfair advantages (e.g., access to free or low-cost capital) while public firms argue that they carry burdens (e.g., requirements to cross-subsidize and serve unprofitable market segments) which inhibit their ability to compete on an even basis. Little theoretical or empirical work has been done, however, which examines the impact of public-private competition

on the strategies and behaviour (both economic and political) of the two sides. For example, is the behaviour of government-owned firms in competitive markets likely to be similar to that of private sector firms, or will it differ in systematic ways? This essay examines alternative strategies that public firms can take in competing with private sector firms, and attempts to explain why public enterprises make choices that differ not only from private firms, but among each other as well. Its central argument is that, in order to understand the behaviour of government-owned firms, it is essential to understand the objectives and incentives structure of enterprise managers, for the goals of these managers may be very different from those of their owner-governments.[1] That this is so does not necessarily make public enterprise a poor vehicle for delivering public policy; indeed, shrewd policy-makers may be able to manipulate the incentive structure of enterprise managers to have the latter make politically unpopular decisions that elected officials would not dare to make openly. But the possibility of opposing interests does enormously complicate government/enterprise relations, particularly in competitive markets.

This paper, although it is concerned with the politics of enterprise decision-making, gives primary emphasis to the role of the firm rather than to the role of government. It is, in a sense, written from the perspective of enterprise managers, for it attempts to outline how <u>their</u> perceptions of institutional

dilemmas and external constraints will elicit specific responses. Part I of the paper outlines three broad strategic options for government-owned firms, and suggests several factors that will influence why enterprise managers choose (or emphasize) one strategic option over the others. Part II of the paper then outlines a more detailed set of public enterprise responses to competition, and attempts to show how these patterns are influenced by the enterprise's broader strategic choices and by market conditions.

PART I

Enterprise Strategies and Government Constraints

The objectives of government-owned firms can be subsumed under three broad categories.[2] First, firms are likely to have the goal of security -- at a minimum, the continuation of the firm as an organizational entity, and presumably growth (or at least the prevention of major organizational shrinkage) as well. In addition, public enterprises may pursue autonomy from their owner-governments, resisting a multitude of government commands and urgings that often conflict with one another and that may saddle the enterprise with a host of unwanted burdens. Finally, government-owned firms may pursue public service objectives -- i.e., goals that a profit-maximizing firm would not, but that government or enterprise managers have determined to be socially desirable, such as creating jobs in underdeveloped regions, keeping consumer prices low, or maintaining employment.

Often these goals will be complementary -- e.g., promoting regional development may help to improve the firm's security prospects by winning it political support. To cite one well-known example, the Tennessee Valley Authority's stress on abundant electricity at the lowest possible rates helped the TVA build a strong support coalition spearheaded by distributors of TVA power.[3] But in other cases, these three goals are likely to

clash: keeping prices low and retaining excess workers, for example, is likely to reduce a state-owned firms' financial independence from government. We can thus conceptualize three distinct corporate strategies corresponding to each of three public enterprise objectives outlined above. A firm pursuing a security strategy, for example, would allocate resources based primarily on how that allocation affected its political support coalition. The firm would seek above all to build a stable and adequate base of political support (presumably somewhat larger than a "minimum winning coalition" and smaller than unanimity). Such an enterprise might, for example, maintain operations (e.g., coal mines) that can no longer be justified on either economic or social grounds, but which win regional support for the firm. In the Canadian context, a federal Crown corporation of this type would be likely to respond to pressure from the federal government to avoid giving feisty provincial premiers yet another opportunity to engage in Ottawa-bashing for fun and political profit.

An enterprise strategy emphasizing corporate autonomy, on the other hand, would call for rejecting actions that increase the firm's financial dependence on government. Such a firm would almost certainly place substantial emphasis on profitability, not so much for its own sake, but because a firm that receives funds from government agencies will have trouble resisting their efforts to tell them what to do. This would not be a serious problem if government agrees to compensate the enterprise for each activity

it undertakes at government's bidding (essentially the relationship involved in government subsidy and contracting with the private sector). But the combination of government ownership and public financial support is likely to create a situation in which the boundaries of acceptable government intervention (or pressure) and enterprise social responsibility are poorly defined. Even when government and enterprise have a contract defining their relationship, government may place demands upon the enterprise in excess of the firm's contractual obligations and government's willingness to pay.[4]

Finally, a public enterprise might pursue a public service strategy, emphasizing specific aspects of its mandate even when doing so increases the firm's financial dependence on government and/or weakens its political support coalition. A nationalized railway stressing energy efficiency, for example, might discontinue energy-inefficient long-distance passenger trains even though doing so could cost the firm support in some regions of the country. Such a mandate might be either government-directed or decided independently by the firm's management and/or board of directors. A public service strategy can help a public enterprise to meet security and autonomy objectives as well: if a government-owned firm can gain a reputation for expertise in a particular field of activity, it is more likely to gain political support and to be able to resist outside direction. But this is not as easy as it sounds, for except when firms perform highly

specialized functions (e.g., insuring bank deposits), the various actors in a government-owned firm's environment are likely to have -- and to seek to impose upon the enterprise -- conflicting interests.

These ideal types of corporate strategy suggest very different directions for public enterprise behaviour. Which of these strategies are public enterprise managers likely to select in practice? If they could choose free of constraints, enterprise managers have strong incentives to pursue an autonomy strategy, for successful pursuit of that strategy will allow the enterprise to achieve both autonomy (by minimizing financial dependence on government) and security (by minimizing the firm's need to build political coalitions in order to maintain the organization). (See Table 1.) But the autonomy strategy is not a realistic option for most public enterprises; they are too dependent on government funding and too subject to conflicting demands on their limited resources.

Two types of constraints are likely to determine the government-owned firm's choice of corporate strategy: the nature of the firm's financial dependence on government, and the character of the governmental command structure for the enterprise.

While a public enterprise's reliance on government funding -- and hence its corporate strategy -- will be heavily influenced by

Table 1

If successful strategy is:	Attainment of goal is: Security	Autonomy	Public Service
Autonomy	High	High	Uncertain
Security	High	Low	Uncertain
Public Service	High	Low	High

the nature of the industry it is in (e.g., most oil companies are profitable, most urban transit services are not), industry and market structure are themselves set in large degree by government decisions. The evolution of rail passenger service in Canada is an example: when Canadian National Railways was the dominant provider of intercity passenger trains, it sought to discontinue them and avoid new investments in passenger equipment because that business was unprofitable, draining resources away from its other businesses. In short, it pursued an autonomy strategy, and it sought to exit from rail passenger service as a manifestation of that strategy. When Ottawa set up a new Crown corporation, VIA Rail Canada, to take over rail passenger operations from CN and CP, VIA managers had very different incentives from those at CN, for VIA's survival was dependent upon maintaining political support for the company despite efforts by Transport Canada to cut services substantially. VIA has sought increased government capital spending and has had an ambivalent attitude toward service cuts. Both CN and VIA are federal Crown corporations, but with very different interests. A government decision restructuring the rail industry thus had a substantial influence on the strategy of the firms operating passenger service.

At least five dimensions of public enterprise financial dependence appear to influence enterprise choice of strategies:

1) the level of support (as a percentage of enterprise expenses). As the overall financial dependence of the enterprise grows, autonomy becomes less achievable, and managerial concern with enterprise security presumably increases.

2) Visibility of support -- i.e., whether the enterprise is actually providing funds, or merely giving the enterprise an opportunity to earn monopoly profits. As the visibility of support for the enterprise grows, political pressure is likely to grow as well, weakening its ability to achieve autonomy.

3) The government's discretion in providing support -- i.e., whether the government can, in the short term, refuse to meet an enterprise's losses or capital needs. All government commitments to an enterprise can presumably be withdrawn over time, but those which are embedded in statutes or constitutions are presumably less easily revoked. Subsidies subject to annual review force the enterprise to follow a security orientation in order to gain support for continued subsidy.

4) Specificity of support. Limiting government support to a specific segment of a government-owned firm's business (e.g., through a contract mechanism) increases the firm's responsiveness to public policy in that segment of the firm's operations. At the same time, it lessens the company's need to cross-subsidize unprofitable operations with profitable ones,

and weakens the legitimacy of political demands in other segments of a corporation's business (if any). Thus the firm will not have to build general support to maintain itself.

5) The parity of governmental assistance to public and private firms in an industry. If a public enterprise is not receiving special favours or treatment but is being compensated on the same basis as private sector firms, it is again more likely to be able to resist demands from its political environment, claiming that it needs to be able to compete on even terms with those firms. Canadian National Railways, for example, receives hundreds of millions of dollars each year in VIA contracts, grain-hauling subsidies, branch-line subsidies and Maritime freight rate subsidies, but it can claim that CP Rail is receiving the same treatment. The Canadian Broadcasting Corporation, on the other hand, is clearly not in the same position as the CTV and Global networks in terms of government support. (See Table 2 for a summary of financial constraints.)

The channels through which governments give commands to and maintain the accountability of state-owned enterprises vary significantly both within and across nations; they include ministerial directive power, government appointment of the Board of Directors, ministerial approval of capital and/or operating budgets, and parliamentary approval of subsidies. The specific

Table 2

EFFECTS OF FINANCIAL DEPENDENCE ON PUBLIC ENTERPRISE STRATEGY

	High	Low
Level of financial dependence is:	Security	Autonomy
Directness of government financial assistance is:	Security	Autonomy
Government's discretion in providing financial assistance is:	Security	Autonomy
"Service-specificity" of government assistance is:	Public Service in area supported; Autonomy in other areas	Security
Parity of government assistance is:	Autonomy	Security or Public Service

channels of control are less important for our purposes than the degree and concentration of control exercised. (See Table 3.) In a relatively unconstrained environment, where government has relatively weak controls over the enterprise or has the potential to control but chooses not to exercise it, firms are likely to pursue an autonomy strategy. Government-owned firms with strong, centralized controls will presumably pursue a public service strategy, emphasizing the goals espoused by their controlling agency. Enterprises with strong but divided controls are likely to follow a security strategy, as their governmental masters make incompatible demands on them.

There is not room in this forum to provide a rigorous testing of these hypotheses. But the arguments do provide a framework for understanding the incentive structures acting on enterprise managers. The remainder of this paper will be devoted to showing how variations in constraint patterns, and resultant differences in public enterprise strategy, will affect public enterprise behaviour in competitive markets.

Table 3

EFFECTS OF GOVERNMENT COMMAND STRUCTURE ON PUBLIC ENTERPRISE STRATEGY

Government Command Structure is:	Government Command Structure is: Strong	Weak
Centralized	Public Service	Autonomy
Dispersed	Security	Autonomy

PART II

Enterprise Behaviour in Competitive Markets

Public enterprise response to private sector competition can take a variety of forms. Pricing initiatives can be used to alter the government-owned firm's market share (including driving competitors out of business) or its rate of return on investment. Product line initiatives involve the addition and deletion of specific products within the company's scope of operations -- e.g., decisions by Air Canada to add or discontinue specific routes or frequencies, add charter and tour operations, etc. Efficiency initiatives attempt to alter the cost structure by employing its factors of production more effectively, either producing the output with fewer inputs, or a greater output with the same inputs. Efficiency initiatives are likely to be most controversial when the input affected is labour, and management's objective is to cut jobs. Finally, lobbying initiatives seek to bring state power to bear to protect or enhance the competitive position of the public enterprise -- e.g., by limiting existing competitors to specific segments or a specified share of the market, limiting entry by new firms, establishing minimum prices that will protect the rate of return of all firms in the market, or lifting social obligations imposed on the firm by government.

Obviously, the responses of public sector firms to private sector competition are likely to embody a combination of these initiatives. And just as obviously, an enterprise's initiatives will be constrained by what its owner-government mandates and/or what enterprise managers believe government will accept. Our concern here is with how these initiatives are combined to reflect the goals and strategies of enterprise managers and government and market constraints. This section will outline four common and very different patterns of public enterprise behaviour in competitive markets, as well as one that is theoretically possible but unlikely to be seen in practice. At the same time, it will discuss the structural conditions that lead enterprises to choose one or another pattern of behaviour, illustrating this analysis with cases drawn from the Canadian and U.S. public sectors.

Competitive Behaviour: One option for publicly owned firms is to imitate the behaviour of private sector firms, utilizing the firm's competitive status to win freedom from government-imposed mandates. Such a firm might be expected to undertake product-line initiatives, including moving into markets outside its traditional areas of concentration where it felt that it could be successful, and out of markets where it felt that it could no longer compete effectively; efficiency initiatives to bring its costs in line with those of private sector competitors; and lobbying initiatives to lower government-imposed burdens on the firm.

We would expect such behaviour to be common among firms pursuing an autonomy strategy -- and hence among firms with a weak governmental command structure and a relatively low degree of dependence on public funds. Canadian National Railways provides a good illustration of how an autonomy strategy can lead to competitive behaviour by a public enterprise. With the passage of the National Transportation Act, CN won partial service-specific compensation for its passenger and grain-carrying losses, helping it to attain corporate profitability by the mid-1970s. An aggressive management headed by Robert Bandeen (and aided by a Minister of Transport sympathetic to enterprise independence, Otto Lang) aggressively carried out many of the initiatives outlined above. CN lobbied heavily for relief from money-losing operations (e.g., remaining intercity passenger and grain losses, Newfoundland Railway, Montreal commuter service), joining forces with Canadian Pacific where they shared government-imposed burdens.

CN product-line and efficiency initiatives are also evident in a number of its divisions, such as CN Express, the parcel and less-than-truckload service. CN Express' problems stemmed largely from its maintenance of a national terminal and delivery network while carrying all types of shipments from small parcels to multi-piece industrial shipments; it was also hurt by the entry of U.S.-based United Parcel Service into the Ontario market. CN Express lost market share to specialized carriers which, by concentrating on individual market segments and larger population centers, were

able to charge lower rates than CN Express.[5] Overstaffing and low labour productivity were also serious problems. The result was oceans of red ink: CN Express losses peaked at $53.1 million in 1980 on revenues of $126.9 million.

Decisive solutions to CN Express' financial problems were delayed for several years by disputes within the company over whether changes in management and market orientation would be adequate to stem the losses. Cutbacks in Express promised special political problems as well, since the division has substantial operations in the economically depressed Maritime provinces.[6] In 1980, a new CN Express management team brought in by Bandeen decided to concentrate the division's service on large, multi-piece shipments and line hauls between major markets. CN Express management proposed dropping small parcel service, while increasing use of local truckers for pickup and delivery (with a surcharge for interlining), and closing as many as 46 of the division's 76 terminals throughout Canada. By continuing to provide service to larger customers throughout its route network, CN Express avoided abandonment hearings before the Canadian Transport Commission (CTC), thus denying critics a forum to charge that a Crown corporation was shirking its responsibilities, and skirting the risk of negative decision by the CTC.

CN sought to meet the expected political uproar over cuts in Express service and employment with a classic bargaining ploy: it

used the threat of a total shutdown to make cutbacks acceptable to the federal government and the unions.[7] A few terminal closures were delayed under pressure from Ottawa, but major rationalization did occur. Under the market concentration plan, CN Express shipments handled fell steadily from 8.9 million in 1979 to 1.4 million in 1983.[8] In a further cost-cutting move, CN in 1983 merged the managements and terminal operations of CN Express and CN's independently operated trucking subsidiaries. Work forces of the two divisions were not merged because the employees belong to different unions, and CN management did not want wrangling over labour contracts to delay savings from terminal and management changes. After resolution of these issues, a complete consolidation took place late in 1984.[9] In short, CN probably encountered more obstacles to rationalizing its express operations than a private firm would have,[10] but its goals were clearly similar to those of a private firm. It was able to rationalize CN Express because Ottawa was restrained in its use of controls on the firm.

Oligopolistic Behaviour: Private sector firms do not always compete aggressively, realizing that the return to all can often be maximized, and risk minimized, by establishing formal or informal cartel arrangements. Indeed, a large body of economic literature attributes government rate and entry regulation to industry efforts to limit competition.[11] There is no reason to believe that publicly owned firms will be immune to these

anti-competitive incentives. We would expect an oligopolistic public enterprise to refrain from pricing initiatives to increase its market share if such decisions meant (as they generally would) lower prices and destabilization of the cartel. The same is true of product-line initiatives. Such firms would be expected to lobby for tightening of the cartel, and be somewhat laggard in imposing efficiency initiatives.

Under what kinds of conditions are public enterprises likely to engage in oligopolistic behaviour? One such set of conditions is a combination of relatively low natural barriers to entry, pressure by government to cross-subsidize unprofitable operations, and enterprise efforts to maximize its financial independence from government. The focus of such efforts will be lobbying initiatives by the firm to limit entry and stabilize prices. Air Canada was until recently a classic case of such a firm: it experienced simultaneous pressures from Ottawa to serve money-losing routes and to minimize its subsidy demands on the federal treasury.[12] Air Canada, in turn, sought to keep its competitors out of its most lucrative markets (notably the transcontinental routes) and in the late 1970s resisted the expansion of discount fares and interregional competition from regional airlines. In 1978, it further sought to limit competition by purchasing Nordair -- a move that was approved by Cabinet only with the understanding that Nordair would be sold again when a suitable purchaser could be found.[13] A similar pattern of oligopolistic behaviour can be

found in the efforts by Gray Coach, the regional bus subsidiary of the Toronto Transit Commission, to limit competition from private sector carriers.[14]

A second set of conditions likely to encourage oligopolistic behaviour by public enterprise occurs when most of the firm's product is a natural resource destined primarily for export markets -- e.g., copper, oil or potash. Here an owner-government is likely not only to acquiesce in the oligopolistic behaviour but to encourage it, since a successful oligopoly will increase the economic rents accruing to government as well as the firm.

The Potash Corporation of Saskatchewan (PCS) closely approximates this type of oligopolistic behaviour. Established after a long and bitter dispute over taxation and production controls between the NDP government of Saskatchewan and (mostly multinational) producers, which severely disrupted expansion of production capacity, it is now the province's largest producer. PCS has not been a boat-rocker; indeed, the "N.D.P. government's strategy was precisely to have PCS take its place among the established producers and to demonstrate that government was capable of running mines for profit by playing according to the ground rules of corporate capitalism."[15] It cooperates with other producers in offshore sales through Canpotex, a marketing organization of potash producers, and has continued the private firms' stress on stabilizing prices.

Market-Segmenting Behaviour: An alternative response by public firms to private sector competition is the attempt to develop a specialized market niche regardless of economic viability, drawing upon government resources as needed. We would expect to find such behaviour in particular among public firms in declining industries and/or among high-cost producers with little likelihood of adapting successfully to competition. Highly dependent upon government funding, such firms must build a base of political support for continued funding if they are to avoid organizational shrinkage or even collapse. As noted in Part I, public firms can attempt to do so either by (1) working to achieve a specified set of non-commercial goals, executing the wishes of a govermemnt agency or gaining a reputation for doing so on its own (the public service strategy); or (2) drawing political support from a variety of sources and allocating marginal resources where required to secure that support (the security strategy). In either case, we might expect the firm to undertake lobbying initiatives to win increased funding stability. Those pursuing a security strategy would refrain from many efficiency and product-line decisions that would lower the firm's losses, but also lower the firm's political support among consumers and employees. Prices might be kept at levels that increase consumption of the firm's products, building clientele support at the cost of increased losses.

The case of VIA Rail Canada is instructive in this regard. While VIA has very little control over its route network (the

Canadian Transport Commission regulates route discontinuances subject to override by Cabinet), and lacks important controls over service quality,[16] VIA fare policy is set by negotiations between VIA and the federal Department of Transport (Transport Canada). VIA officials feel that low marginal costs of serving additional passengers justify keeping the company's fare low; this policy also expands the company's constituency. (VIA fares covered 27 per cent of expenses in 1983.) Transport Canada, on the other hand, has encountered very heavy pressure from the bus industry (especially in the Quebec-Windsor corridor) to stop what the latter regard as predatory pricing by VIA.[17] VIA has resisted this pressure to increase fares, which would likely result in a significant decline in patronage.

Market-segmenting firms may even openly challenge their owner-governments when the firms' interests are at stake, and managers feel that they can win. Amtrak provides a good example: the Carter and Reagan administrations sought to impose major cutbacks in Amtrak's route system in 1979 and 1981, respectively. Amtrak's management feared that the Reagan administration proposals would erode the corporation's support in Congress (by lowering the number of legislators whose districts would be receiving benefits) to such an extent that the corporation's survival would be threatened. On both occasions, Amtrak's management was able to use the company's divided governmental command structure to corporate advantage, lobbying with Congress to weaken the proposed

cuts. In 1981, for example, Amtrak's president, Alan Boyd, charged that because of statutory labour protection payments, fixed operating costs and contractually obligated capital expenditures, the Reagan administration's proposed budget ceiling would force the shutdown of all routes outside the Boston-Washington Northeast Corridor.[18] Although the Department of Transportation disputed that claim, it proved to be an effective strategy. There have been few changes in the Amtrak route structure since 1981: the firm has established a stable base of political support, making the Reagan administration reluctant to expend the political resources needed to enact further cuts during the president's first term.

Example of successful market-segmenting behaviour can also be found in the manufacturing and natural resources sectors, notably among firms which governments have rescued from financial collapse. Atomic Energy of Canada Ltd., Canadair, DeHavilland and the Cape Breton Development Corporation have all failed to varying degrees to meet tests of financial viability in the marketplace, and base their claims to continued government support on preservation of Canadian technology, regional development and employment, or both.

"Market-Leader" Behaviour: Rather than following the lead of private sector firms or seeking a distinctive market niche for itself, a public enterprise may attempt to modify the behaviour of

its competitors in a direction consistent with public policy objectives. In order to do so successfully, the firm must presumably have a strong public service orientation, probably reinforced by a strong centralized governmental command structure. In addition, the firm must have strong levers to compel or induce compliance from its competitors.

The efforts of Petro-Canada to promote exploration in Canada's frontier areas (notably the arctic and offshore Atlantic) comprise a fairly clear case of market-leader behaviour. Petro-Canada has filled the gap created by the reluctance of private sector oil companies to undertake high-risk and high-cost frontier exploration as quickly as Ottawa wanted. Petro-Canada spends a much higher percentage of its capital budget on frontier exploration than private sector firms, often in joint ventures with those firms.[19] Petro-Canada has also been used to funnel federal funds into other high-risk projects such as Panarctic Oils and Syncrude. These activities, financed in large part by infusions of equity by Ottawa, also serve Petro-Canada's security needs by giving it a "public service" justification for its continued existence when it acts just like private sector firms in most of its activities (e.g., gasoline pricing). Whether Canada is better off as a result of Petro-Canada's investment priorities -- especially since they divert investment away from conventional, low-cost sources in Western Canada -- is another question.[20]

"Aggressive Monopolist" Behaviour: One possible, but unlikely, form of public enterprise response to private sector competition is for the firm to utilize its access to government to have competitors compelled by government fiat or to engage in predatory pricing (drawing on the state treasury) to drive competitors out of selected markets. The firm could then reap monopoly profits, assuming that entry barriers were sufficiently high to dissuade potential new entrants. Such a firm would be expected to price very aggressively and to lobby its owner-government to create artificial barriers against private sector competition. If a monopoly is achieved, we would expect that their firm would undertake few product-line and efficiency initiatives, since it would have no competitive pressures to force it to do so. Such a course of action would presumably require an autonomy strategy by the enterprise, as well as strong backing from government in the face of substantial opposition from competitors and possibly from consumers. Governments will presumably be reluctant to give such backing except in rare circumstances -- e.g., when they are seeking to oust a foreign-owned firm. Even if government grants monopoly privileges, it is unlikely to grant monopoly profits if the firm's product is consumed domestically.

Postal operations are one area where "aggressive monopolist" behaviour seems most plausible. Indeed, the U.S. Postal Service and its predecessor agency have lobbied strongly against the erosion of their monopoly on first-class mail. Failure to do so,

USPS managers fear, would lead to "cream-skimming" by competitors who would carry only mail within cities and between large markets, causing the elaborate system of cross-subsidy benefiting rural and long-distance postal users to collapse. But political pressure to keep rates low, exercised through the Postal Rate Commission, has kept the Postal Service at essentially a break-even position overall. In addition, the Postal Service is forbidden from providing subsidies between classes of mail, which would be necessary in the short term, if it was to establish a market monopoly without government fiat: thus the USPS was forced to drop its money-losing "E-Com" electronic mail delivery system in 1984 due to protests by competing systems, who claimed that USPS was engaged in predatory pricing.[21]

While the Postal Service did attempt in the 1970s to follow pricing rules that assigned most of its fixed costs to first-class mail, this appears to have been more an effort to avoid being pushed out of competitive markets by more efficient producers than to force out its competitors. Moreover, these policies were successfully challenged in the courts not only by the Postal Service's competitors, but by its first-class mail customers who felt injured by higher prices for their service (e.g., the National Association of Greeting Card Publishers).[22]

One competitive market where the Postal Service has fared poorly is parcel service. Its market position has been steadily eroded

by the United Parcel Service, which has a lower labour cost structure, and which has turned its more truncated pickup and delivery system into an advantage, creaming off the bulk of multiple-package business orders, leaving the Postal Service with a disproportionate share of small package deliveries. UPS has, moreover, strongly resisted in hearings before the Postal Rate Commission efforts by the Postal Service to institute pricing and product-line innovations that would win back some of the traffic lost to UPS.[23]

In short, the Postal Service's behaviour has been much closer to that of the "oligopolistic" pattern than that of the "aggressive monopolist," with the public enterprise attempting to preserve its limited monopoly and system of cross-subsidization against external attack. Because the firm is subject to challenge in a variety of arenas (courts, Congress, the Postal Rate Commission) "aggressive monopolist" behaviour has simply not been possible.

Conclusions

The analysis in this paper has implications for both analysts of enterprise behaviour and policy-makers. For the former, it suggests that while it is possible to go beyond case studies of individual firms to develop more general models and explanations of public enterprise behaviour, we should not expect all government-owned firms to adhere to a single behaviour pattern. Differing constraints lead to differences in enterprise strategy and enterprise behaviour.

Indeed, individual government-owned firms may exhibit different behaviour patterns in different segments of their operations. The Potash Corporation of Saskatchewan, for example, while it is oligopolistic in pricing behaviour, has been a market leader in promoting investment in new mines. In combining these different types of market behaviour, PCS meets the mostly clearly articulated concerns of its owner-government (i.e., high returns and industry growth) while improving the firm's financial performance.

For policy-makers, the major lesson is that the managers of public enterprises have a set of objectives distinct from those of government. Thus they cannot be relied upon to passively followed government mandates which are, in any case, often unclear or self-contradictory. Indeed, public enterprise managers are likely

to place security and autonomy objectives for the firms above "public service" goals. Government managers need to take management's incentive structure into account when they are designing or altering constraints on a public enterprise if they hope to achieve their own objectives. A government-owned firm with weak financial and command structure constraints, for example, is unlikely to be an effective "market leader" when it can improve its own financial performance through competitive or oligopolistic behaviour. This does not mean that governments need to tighten their controls on all of a firm's activities in order to ensure that some of the firm's behaviour meets specified non-commercial objectives; a contract mechanism, for example, may be more useful in specifying (and compensating) the firm for social obligations in a limited range of activities while leaving the firm free to pursue commercial objectives in areas where there are no overriding state objectives.

Because the strategies and output of public enterprises vary depending on government constraints, governments should tailor their controls to the individual enterprise and to the objectives they have established for that enterprise. Establishing uniform command structures and financial controls applicable to all public enterprises is likely to be a misguided effort. Such rules ignore the diversity of purposes for which state enterprise is employed and the differing types of enterprise behaviour needed to achieve those goals.

Notes

1 On this subject, see the essays in Raymond Vernon and Yair Aharoni (eds.), State-Owned Enterprise in Western Europe (London: Croom Helm, 1981).

2 Firms are, of course, collectivities and thus cannot be strictly speaking said to have goals. This paper uses public enterprise goals and strategies as a shorthand term for the goals and strategies of top enterprise managers. This is, admittedly, an oversimplification which downplays differences of opinion within the firm's management. For a further elaboration of this point and others in Part I of the paper, see Kent Weaver, The Politics of Industrial Change (Washington, D.C.: The Brookings Institution, forthcoming, Chapter 6).

3 See Richard A. Couto, "New Seeds at the Grass Roots: The Politics of the TVA Power Program since World War II," in Erwin C. Hargrove and Paul K. Conkin (eds.), TVA: Fifty Years of Grass-Roots Bureaucracy Urbana: University of Illinois Press, 1983, pp. 230-60).

4 Of course, government cannot ultimately escape paying for the burdens it imposes on a firm if those burdens cause the firm to run deficits and/or require capital assistance from government. But there are still incentives for government entities to use informal mechanisms in order to: (1) allow government entities to delay or obfuscate their financial responsibility for burdens imposed on the firm; (2) transfer responsibility for those burdens elsewhere -- e.g., if the ministry applying the pressure is different from the one responsible for the firm; (3) argue that the firm's losses are the result of poor management rather than government action.

5 See the discussion of R.A. Bandeen before the House Standing Committee on Transport and Communications, Minutes of Proceedings and Evidence, 32nd Parliament, 1st Session, Issue 21, esp. pp. 62-63, 70-71, 80-81, 18 December, 1980. See also Currie, Canadian Transportation Economics, Chapter 13.

6 About one-third of CN Express' deficits were attributed to service in the Maritimes outside major population centers (Charlottetown: Guardian, 2 April, 1980, p. 1).

7 CN's strategy in dealing with Express' financial problems is discussed in two articles by Anderson Charters in the Financial Post, "How Perron Battled for CN Express Shakeup," 13 December, 1980, p. 25; and "Jobs vs. Profits Dilemma at CN Express," 20 December, 1980, p. 16, and in testimony by CN and CN Express officials before the Senate of Canada, Standing Committee on Transport and Communications, Proceedings, 32nd Parliament,

1st Session, Issue 5, 3 December, 1980. (See, in particular, pp. 27-28 and 42-43 on the subject of regulation of abandonment and rates.)

8 Canadian National Railways, 1983 Annual Report, p. 1.

9 Montreal Gazette, 6 November, 1984.

10 CP merged its CP Express and CP Trucks divisions just a few days after CN did so, with virtually no public comment (Toronto Globe and Mail, 9 November, 1984, p. B9).

11 See George Stigler, "The Theory of Economic Regulation," Bell Journal of Economics and Management Science, 2,1 (Spring 1971), pp. 3-21.

12 See, for example, John Baldwin, The Regulatory Agency and the Public Corporation: The Canadian Air Transport Industry (Cambridge, Mass.: Ballinger, 1975). Baldwin argues that TCA/Air Canada sought a break-even position to avoid both government displeasure over deficits and the danger of being sold off if the company became too profitable. Yet he does not explain why the company's managers would necessarily object to being sold off, especially if the company remained intact. Indeed, both Air Canada and Canadian National Railways managements endorsed sale of their companies to the public in the late 1970s. In the United States, the federally owned Consolidated Rail Corporation is currently being sold to the private sector with the endorsement of enterprise management. A better explanation of Air Canada's "break-even" performance would seem to be that this was the best that government would tolerate: as the overwhelmingly dominant carrier in the Canadian market, regulators could easily adjust fares and routes to achieve such a position. As the federal government became more tolerant of Crown corporation profits in the mid-1970s (most notably under Otto Lang's tenure as Transport Minister), and other carriers attempted to challenge Air Canada's dominant status, the Crown airline's management endorsed the concept of privatization, which would give it more flexibility to meet these challenges.

13 On this period, see John Langford, "Air Canada," in Allan Tupper and G. Bruce Doern (eds.), Public Corporations and Public Policy in Canada (Montreal: Institute for Research on Public Policy, 1981, pp. 272-3).

14 See John Palmer, John Quinn and Ray Resendes, "A Case Study of Gray Coach Lines Ltd.," in J.R.S. Pritchard, Crown Corporations in Canada: The Calculus of Instrument Choice (Toronto: Butterworth, 1983, pp. 369-446, esp. pp. 380-6).

15 Jean Kirk Laux and Maureen Appel Molot, "Potash Corporation of Saskatchewan," in Tupper and Doern, op. cit., pp. 197-8. This discussion is based primarily on the Laux and Molot essay.

16 VIA trains are operated over CN and CP Rail tracks; thus VIA is dependent on Railway dispatching to maintain its schedules.

Nor has VIA been able to win approval from the federal government for a re-equipping of its rolling stock outside the Quebec-Windsor Corridor to improve service quality and lower operating costs. Most of VIA's non-Corridor equipment is more than 30 years old. The company's new Corridor equipment, the LRC (Light, Rapid, Comfortable) trains, have had repeated mechanical problems.

17 See testimony by Paul Martin, Chairman of Voyageur Enterprises, before the House of Commons Standing Committee on Transportation and Commerce, Minutes of Proceedings and Evidence, 32nd Parliament, 2nd Session, Issue No. 15, 17 May, 1984.

18 See the statements of Amtrak's president, Alan Boyd, and Federal Railroad Administrator Robert Blanchette in U.S. Congress, Senate Committee on Commerce, Science, and Transportation, Amtrak Reauthorization, Hearing, 13 and 17 March, 1981.

19 Petro-Canada devoted 60 per cent of its exploration budget to frontier exploration through 1980, three times the industry average. Peter Foster, The Sorceror's Apprentices: Canada's Super-Bureaucrats and the Energy Mess (Toronto: Totem, 1982, p. 234).

20 On this issue, see Larry Pratt, "Oil and State Enterprises: Assessing Petro-Canada," in W.T. Stanbury and Fred Thompson (eds.), Managing State Enterprises (New York: Praeger Publishers, 1982, pp. 79-110, esp. pp. 102-4). Of course, Petro-Canada may have other advantages for government -- e.g., serving as a "window on industry."

21 "Postal Service Told to Sell E-Com," Washington Post, 6 June, 1984, p. D8.

22 See William Tye, "The Postal Service: Economics Made Simplistic," Journal of Policy Analysis and Management, 3,1 (1983) pp. 62-73.

23 See Christopher Lovelock and Charles Weinberg, "Implementing a Product Market Strategy: The Case of the U.S. Postal Service," in W.T. Stanbury and Fred Thompson (eds.), Managing State Enterprises (New York: Praeger Publishers, 1982, pp. 261-90).

PUBLIC AND PRIVATE BUREAUCRACIES

by

Ronald Wintrobe
Department of Economics
University of Western Ontario
London, Canada

RÉSUMÉ

Au cours des dernières années, l'analyse détaillée des divers modes d'organisation de la production a donné une plus grande ampleur et plus de profondeur à la théorie économique des marchés. Un des principaux domaines d'étude à ce sujet est le comportement des entreprises publiques, c'est-à-dire les sociétés de la Couronne et les ministères. La principale question, en l'occurrence, a été " l'efficacité " relative des sociétés publiques par rapport aux entreprises privées. Des modèles simples -- d'ailleurs assez bien accueillis dans l'ensemble -- paraissent indiquer que les entreprises publiques seraient apparemment moins efficaces en un certain sens que les sociétés privées offrant des services semblables. En outre, beaucoup d'études empiriques ont traité de certaines industries regroupant à la fois des entreprises publiques et des entreprises privées -- comme le transport aérien, le transport ferroviaire, les services d'utilité publique, les hôpitaux, les banques, la radio et la télévision, etc. Ces études ont tendance à appuyer cette prédiction avec une étonnante régularité.

Dans le présent document, je démontrerai que ni la théorie ni les données empiriques recueillies ne nous permettent de faire une distinction entre les deux hypothèses suivantes : (1) les entreprises publiques sont moins efficaces que les sociétés privées; (2) les entreprises publiques sont plus axées sur les

marchés politiques, et moins sur les marchés économiques, que les sociétés privées. La première hypothèse constitue un raisonnement économique important et intéressant. La seconde est plutôt évidente. Mais comme nous le verrons, telle est la seule déduction valable qui puisse être formulée à partir de la théorie et des faits.

En outre, je montrerai qu'il faut comparer la production des entreprises publiques et des sociétés privées, non seulement en fonction du mode de propriété, mais aussi quant à l'aspect contrôle, de même qu'en fonction des rapports qui existent entre la propriété et le contrôle dans les deux secteurs. Par conséquent, une bonne partie du document traite, à la façon d'aujourd'hui, le vieux problème de la distinction entre la propriété (privée) et le contrôle (de gestion) dans l'entreprise moderne, et de ses liens avec ce qu'on pourrait appeler la séparation de la propriété publique du contrôle politique dans l'administration gouvernementale moderne. Je compare notamment l'efficacité relative des mécanismes dont disposent les " propriétaires " (actionnaires) d'entreprises publiques ou privées pour surveiller leurs agents économiques -- soit les cadres et les employés -- et s'assurer qu'ils agissent dans l'intérêt de la compagnie.

Voici comment le document est structuré. La première section expose les théories les plus souvent citées et montre exactement leurs répercussions sur l'efficacité relative des entreprises publiques et privées. Vient ensuite un exposé sur les rapports entre les théories relatives à l'inefficacité gouvernementale et celles qui portent sur l'inefficacité de la gestion dans les sociétés appartenant à des actionnaires. La troisième section traite des mécanismes de protection des propriétaires (actionnaires) contre le pouvoir discrétionnaire de la direction. Elle montre que chacun de ces mécanismes a sa contrepartie dans le secteur public, et laisse entendre, en général, qu'ils semblent plus efficaces dans le secteur public. Vient ensuite une analyse du paradoxe apparent entre cette constatation et le fait que la production gouvernementale est relativement inefficace. La quatrième section présente les conclusions.

I INTRODUCTION

In recent years, the economic theory of markets has been extended and deepened by explicit treatment of alternative ways of organizing production. One major field of study in this area is the behaviour of publicly owned firms -- Crown corporations and government departments. The central question here has been that of the relative "efficiency" of public vs. private firms, and simple models have been developed -- and fairly widely accepted -- which apparently imply that public firms tend to be less efficient in some sense than private firms when both provide similar services. Moreover, a large number of empirical studies have been done of particular industries in which public and private ownership may both be found -- airlines, railroads, utilities, hospitals, banks, radio and TV broadcasting, and so on, and these studies tend to document this prediction with impressive uniformity.[1]

In this paper, I will argue that neither the theory nor the evidence collected can discriminate between the following two alternative hypotheses: (1) government-owned firms are less efficient than private firms; (2) government firms serve political markets more and economic markets less than private firms do. The first hypothesis is an exciting and important piece of economic reasoning. The second is rather obvious. But, I will

argue, it is all that can be validly inferred from the theory and from the evidence.

I will also argue that public and private production should be compared, not merely in terms of ownership, but in terms of control, and in terms of the relationship between ownership and control in the two sectors. Consequently, a large part of the paper deals, in a contemporary way, with the old problem of the separation of (private) ownership and (managerial) control in the modern corporation, and its relationship to what could be called the separation of public ownership from political control in modern government. In particular, I compare the relative strength of the mechanisms available to "owners" of public and private firms to police their agents -- the managers and employees of those firms -- to ensure that their actions accord with the owners' interests.

The paper is organized as follows. The next section outlines the most widely cited theories and shows exactly what the implications of these theories are with respect to the relative efficiency of public and private enterprise. I then discuss the relationship between theories of governmental inefficiency and theories of managerial inefficiency in widely held corporations. Section III then turns to the mechanisms which protect owners (shareholders) from managerial discretion, shows that each of these mechanisms has its counterpart in the public sector, and suggests that, on

balance, these mechanisms would appear to be more effective in the public sector. I then discuss the apparent paradox between this finding, and the evidence that government production is relatively inefficient. Section IV concludes the paper.

II CURRENT THEORIES OF THE EFFICIENCY OF PUBLIC AND PRIVATE BUREAUS

Two major arguments have been put forward in the economic literature on the question of the relative efficiency of private and public bureaus. The first line of thought stems from the definition of a public bureau as an organization whose output is not evaluated in the marketplace. This definition is common to many economic writings on bureaucracy (e.g., Downs (1967), Niskanen (1971)). In some writings (Olson (1973), Alchian and Kessel (1962) it is also served as the basis for a theory of their relative efficiency. Mancur Olson, Jr. (1973) argues that in private firms there is a clear measure of success or failure, which derives from the fact that private firms sell their output for a price. Government agencies, however, typically produce public goods, which cannot be sold because they cannot be divided up so that only those who pay get their share. The same characteristic "publicness" which leads these goods to be provided publicly therefore, according to Olson, has another implication -- they will not be provided efficiently because there is no obvious measure of success or failure in their provision. In a similar vein, Alchian and Kessel (1962) argue that profitability, combined with rights to profits, provides a clear and stronger criterion for evaluating the behaviour of subordinates in for-profit corporations than in government agencies or not-for-profit enterprise.

Cotton Lindsay (1976) has suggested a different version of this argument. He looks at the unmeasurability problem in the U.S. context where Congress is given the task of appropriating funds to agencies. Presumably, they will want to do this on the basis of the agency's perceived performance. For this purpose, he suggests that indexes will typically be devised of agency performance, e.g., in the case of public (veteran's administration) hospitals, indicators typically used include cost of treatment, average patient stay for given illnesses, bed occupancy ratio, etc. These are "visible" dimensions of performance. There are also "invisible" dimensions -- quality of decor, bedside manner of doctors, and so on. Because the invisible aspects of performance cannot be monitored, Lindsay suggests, bureaus will not provide them, and Congress will not fund them. Hence, the average quality of public services will be lower than the quality of similar services provided by the private sector. And average cost of public services will be lower than the cost of private services. These predictions are borne out in a comparison between Veteran administration hospitals and proprietary hospitals.

Finally, it is often argued that public employees have less incentive to be efficient, or a greater incentive to pursue non-pecuniary rewards such as leisure because they cannot "take home" the profits or benefits of greater efficiency. Put simply, in private organizations, unlike public bureaus, there is a "bottom line."

All of these arguments suffer from the same simple defect. To see it, it is helpful to use a distinction Albert Breton and I have made elsewhere (Breton and Wintrobe, 1982) between bureaus -- the internal components of an organization such as the financial department of General Motors or the Department of Finance in the Canadian federal government -- and bureaucracies -- the agglomeration of bureaus which constitutes the whole organization -- General Motors itself or the Canadian federal government. All of the arguments just listed compare entire organizations or bureaucracies in the private sector to individual government bureaus in the public sector, and this comparison is obviously incorrect. The relevant comparison is either between both organizations as a whole (firms vs. governments) or between individual bureaus in each (the financial department of General Motors vs. the Canadian Department of Finance). Comparing firms and governments first, it is clear that in both cases there is an adequate measure of the performance of the whole organization -- profits in the case of firms and popularity as measured by election results and by opinion polls in the case of governments. On the other hand, the output of an individual bureau is typically unmeasurable whether the bureau is part of a private or public organization.

This is obvious in the case of the bureaus just cited (financial departments). At a more general and theoretical level, however, unmeasurability, or costs of measurement, has been the central explanation for why factors tend to be "internalized" within a

firm rather than purchased on the market (Alchian and Demsetz (1972), McManus (1975), Cheung (1983), Yoram Barzel (1983)). All of these writers argue that if the factor's output could be measured at low cost, there would be no reason for that factor to be internalized within the firm. It would, instead, be purchased on the marketpace. The same argument has been applied to governments (Borcherding (1983)). Where factor outputs can be measured at low cost, government agencies would purchase them on the marketplace or via a contractual arrangement rather than internalize their operations into government bureaus. So there would appear to be no difference between public and private production on this score, as suggested by all of the writers above.

The second, and the most popular approach to the relative efficiency of public vs. private firms is the "property rights" approach. This argument emphasizes a difference in "ownership" rights between them and consequent differences in the incentives to owners to monitor management (Alchian (1965), DeAlessi (1974)). Owners of private firms (shareholders) can sell their rights in the market at relatively low cost, whereas the "owners" of the public sector (the citizenry of a particular political jurisdiction) cannot transfer their voting rights, and can dispose of them only by moving to another jurisdiction. This change in property rights (the change in the costs of ownership transfer) implies that, as owners of public firms, citizens will be less motivated to monitor the activities of their agent or manager -- the

politicians in office -- than the owners of private firms (shareholders) monitor private managers. Consequently, government firms will tend to be less efficient than private firms. Specifically, according to DeAlessi,[2] the theory suggests that:

i) the incentive to politicians to detect and police bureaucratic behaviour which is inconsistent with the owner's welfare is reduced;

ii) bureaucrats will have a greater incentive and opportunity to increase their own utility at the expense of their employers;

iii) bureaucrats or government managers will be more responsive to employees and unions; and finally,

iv) the control devices used in government will be less market-oriented and political considerations "including those implied by the peculiarities of the voting system",[3] will become more important in determining the outcome of the decision process.

None of these implications, with the exception of the last one, follows from the theory. Nor does the theory, correctly stated, predict that there will be greater "waste" in public than in private firms though it is widely interpreted in this way. The

theory suggests only that there is a difference between the incentive of shareholders to monitor corporate managers compared to the incentive to voters to monitor politicians. If voters monitor politicians less than shareholders monitor managers (because of the costs of ownership transfer), it would appear that politicians will have greater discretion than corporate managers. But this does not imply that politicians will monitor bureaucrats in the private sector. If politicians have greater freedom to neglect the interests of voters and to pursue their own objectives, why should they cede any of this to the bureaucrats under them? Why should their incentive to detect and police bureaucratic behaviour which is inconsistent with their own objectives be any less than it would be to police bureaucratic behaviour which is inconsistent with the objectives of voters? Why would they allow their bureaucrats more opportunity and incentive to increase their own utility at the expense of politicians? If politicians have greater discretion, the goals of public firms will reflect politicians' wishes more and voters' wishes less than the goals of private firms reflect the interests of their managers as opposed to their shareholders. This, and not the extent to which bureaucrats are monitored, and hence the efficiency with which bureaucrats carry out their tasks in terms of energy expended, dedication, selflessness and so on, is the only valid implication of the theory.

Now let us turn to the validity of theory itself. Do voters indeed monitor politicians less than shareholders monitor

managers? As Fama (1980) points out, the proposition that it always pays investors to diversify their portfolio rather than to specialize in it implies that rational shareholders will tend to hold stock in a relatively large number of corporations. Thus the incentive to monitor the activities of each one must also be small. In other words, the same argument which is used to predict the inefficiency of government bureaus compared to private firms also implies that corporations, especially widely held corporations, would themselves be relatively inefficient as compared with owner-managed firms. As Jensen and Meckling (1976) have emphasized, the apparent efficiency of the corporate forum, as evidenced by its growth, poses a major puzzle for this approach.[4]

Indeed, there is a striking similarity between the arguments which have been made with respect to private vs. public production and those revolving around the problem of the separation of ownership from control in the modern corporation. First of all, ever since the work of Berle and Means (1932), it has been widely suggested that where stockholdings are widely dispersed, corporation managers will have some discretion to neglect the interests of their owners in favour of their own interests. Moreover, corporate managers, like public bureaucrats, are also held to be interested in non-pecuniary forms of consumption, such as excess staff, leisure or the quiet life (sometimes called organizational slack), and their position is said to allow them to pursue these forms of managerial discretion at the expense of stockholders

(Williamson (1964)). Finally, the main interest of corporate managers, it is often suggested, is growth (Marris (1964), Baumol (1967)), for reasons similar to those which prompt theorists of government bureaucracy (e.g., Niskanen (1971)), to suggest that the main interests of government bureaucrats is the size of their bureau. The operation of large corporation, like that of public bureaucracy, is thus explained in terms of managerial motives and the growth of corporations, like the growth of bureaucracy, is explained in terms of managerial rents. So the literatures on the role of managers in modern business corporations and that on managers in public bureaucracies have developed very similar themes, although largely independent of one another.

In the literature on private corporations, there has developed a substantial counter-attack to the Berle and Means thesis. According to this literature, shareholders have three major lines of defence against managerial discretion or utility maximization at their expense. These are: (i) executive compensation -- if shareholders pay managers on the basis of the value of the firm, it will be in the manager's own pecuniary interest to run the firm in the interests of shareholders; (ii) the "market for corporate control" -- managerial discretion or inefficient or wasteful management simply leaves the firm vulnerable to takeover bids. The stock price of the firm will fall, reflecting the inefficiency, and outside purchasers could, by purchasing a sufficient number of the firm's shares to gain control, install

their own management, throw out the existing managers -- if the managerial market is competitive, this factor by itself is sufficient to protect the interests of owners.

Each of these ideas has considerable merit, though whether the mechanisms are sufficiently powerful to eliminate the problem of managerial discretion is still being debated. The interesting point in the present context is that each of these mechanisms also has its counterpart in the public sector. Moreover, at least on an *a priori* basis, the strength of the mechanisms controlling political and bureaucratic discretion in the public sector would appear if anything to be greater than the strength of these forces in the private sector. In the following section, we will outline each of these mechanisms in more detail and discuss the strength and weaknesses of each in the public and private sectors.

III THE SEPARATION OF OWNERSHIP FROM CONTROL

(i) Motives of Managers and Politicians

To take executive compensation first, it is clear that there are a number of ways in which owners can tie their manager's corporation-related incomes to corporate performance in the owner's interest, including direct ownership, stock option plans, and so on. The mechanism is not perfect since managers may have other sources of income and since managers may also derive satisfaction from a number of sources of non-pecuniary income which are available to them only within the corporation: excess staff, being the manager of a large corporation as opposed to a smaller one, making a name for oneself in a short period of time in the hope of moving to another corporation and therefore neglecting the long-run interests of the firm for short-run gain, and so on. Broadly speaking, empirical evidence appears to support the hypothesis. In the most sophisticated study (Masson (1971)), executive compensation was found to be more positively related to stock returns than to sales or to the firm's current (as opposed to discounted future) profits. He also found evidence that firms where the proportional reliance on stock returns is greater do outperform other firms in the stock market.

Turning to the public sector, it is perhaps unnecessary to belabour the point that the incomes, prestige and power of the

chief executives for the public sector (governing politicians) are tied to their performance in a very direct way: their wish to stay in office. Again, the mechanism is not perfect. Politicians are interested in other things besides remaining in office: leisure, extra staff, spending public resources on projects that enhance their own personal prestige but are unwanted by the electorate, and so on. However, it would certainly seem foolish to suggest that popularity and re-election prospects do not act as a powerful disciplinary force upon politicians in office.

Of course, government bureaucrats are not directly motivated by the re-election prospects of governing politicians, and their incomes are not directly tied to the popularity of the government. The same is true with respect to bureaucrats in the private sector and the profits of the firm. Stock option plans are an ineffective way of motivating them: the contribution of any one bureaucrat to the overall profits of the firm is negligible and there would be no reason for him/her to take this into account in decision making even if his/her income were entirely based on the overall profits of the firm.

(ii) Elections vs. Takeover Bids

Another mechanism which disciplines managers in the private sector is the possibility of a takeover bid. Excessive managerial discretion or inefficient management tend to lower the price of that firm's stock, i.e., to open a gap between the actual value of the firm, and its potential value if it were managed efficiently. It supplies a profitable opportunity to investors with sufficient access to large sums of capital and a willingness to bear risks to bid for a controlling interest in the firm. If their bid is successful, and they can successfully replace the inefficient management of the firm with efficient management, they may profit substantially by the increase in the value of the firm's stock to nearer its potential value.

If this market for corporate control were to operate costlessly, divergences between the actual and potential value of firms would be quickly eliminated and the problem of the separation of ownership from control would vanish. There are, however, two reasons to expect that this market will not function in this way. The first is the rather interesting and paradoxical free-rider problem recently pointed out by Grossman and Hart (1982). To see the problem, consider the following hypothetical situation. Firms A and B are identical. Both have been inefficiently managed for some time and in both there is a substantial divergence between the actual and the potential share price. Accordingly, takeover

bids have been launched against both firms. The bids, however, have been put forward by different groups of investors. The group bidding for firm A is one of the most competent and successful in the country. Moreover, if their bid is successful, it is known that they will install a management team which is ruthless, hard-working and almost unbelievably dynamic, and which has a record of turning around ailing firms which is unsurpassed. The potential investors in firm B, on the other hand, are a small and little-known group. Moreover, word has leaked out that, if their bid is successful, they plan to use the firm as a tax write-off. The management team they plan to install is headed by the brother-in-law of one of the investors, who is currently unemployed, and has no fixed address.

Which takeover bid is more likely to succeed? The group taking over firm B, of course. All of the shareholders in firm A would no doubt love to see the takeover bid there succeed. But each individual shareholder would be a fool to sell his share and watch others profit from the installation of a new and efficient managerial team. Accordingly, each shareholder attempts to "free-ride," hanging on to his own shares and hoping others will sell theirs so that the transfer of ownership may be effected. Since every shareholder reasons in the same way, no shares are sold and the takeover bid is unsuccessful. In firm B, on the other hand, from all appearances the takeover, if successful, will tend to

depreciate the value of the firm. The rational shareholders may want to sell and the takeover bid will be successful.

Of course, the real world is not constructed so simply as our hypothetical example. In particular, information as to the likely prospects of the firm in the event that the takeover is successful will seldom be so complete as it is in our example. In addition, investor groups, which are planning to increase the value of the firm, will be able to make a better offer to shareholders than groups who are planning to run the firm into the ground. To the extent that this is so, and that post-takeover prospects of a firm are surrounded by uncertainty, "good" takeovers, i.e., takeovers which are in the long-run interests of the firm, may take place. Still, the principle, however bizarre, remains: the more competent the management team attempting the takeover, the less likely is that takeover to succeed. And to suggest that the market for corporate control may nevertheless function effectively if only shareholders are uninformed or, better still, misinformed, does not enhance our faith in it by a great deal.

The other problems with the market for corporate control as a device for disciplining managerial behaviour may all be subsumed under the rubric of transactions costs. Takeover bids of this type will, of course, be resisted by the existing management of the firm, and the group attempting the takeover can expect a long and costly battle. Takeovers are risky, require access to large

amounts of capital, and can be enormously costly to organize. For all of these reasons, it would appear that the probability of a takeover declines as the size of the company increases, and managers of the very largest firms are probably immune from the threat of takeover.

It is not surprising, then, that evidence on the effectiveness of the market for corporate control has not been very favourable. Although takeovers are numerous, many are of an entirely different character and are made for entirely different reasons than for the purpose of throwing out inefficient management. Often they simply represent the purchase by large firms of small profitable firms: in Singh's (1975) study of British firms, the acquired firm was more profitable than the acquiring firm in almost half the cases studied. Other studies have produced direct (although undoubtedly imperfect) estimates of the extent of managerial inefficiency necessary to induce a takeover bid. In Hindley's (1970) pioneering study, the value of a firm could drop to two-thirds of its potential value before a takeover bid would be launched. Smiley's (1976) study used two different methods: in one, this estimate was raised to 86 per cent, but in the other he found that "the value (at the time of the decision to tender) of total wealth losses of tendered firms is 50 per cent of what the firm would have sold for had its management maximized profits throughout the ten year period prior to the offer. Alternatively, the market

price of the firm is only one-half of what it would have been had the firm maximized profits."[5]

The analogue to the takeover bid in the public sector is, of course, the general election, at which time opposition parties "bid" for control of the machinery of government. How do general elections compare with takeover bids as a means of disciplining existing management? They can be compared in terms of the two issues just discussed: the free-rider problem and cost of organization. Unfortunately, no empirical evidence has ever been collected on the extent to which politicians maximize their popularity, as opposed to pursuing other interests, and so our comparison will have to be limited to theoretical considerations.

To take the free-rider problem first, it has been recognized ever since the work of Anthony Downs (1957) that political markets suffer from a tendency to free-riding on the part of the electorate. The costs of voting -- getting registered, becoming informed on the alternative policy positions of different candidates, finding the polling booth, etc. -- are positive. If the benefits from voting are calculated on the probability that one's vote will make a difference to the election outcome, multiplied by the net benefit to the voter of having his preferred party win the election, then the benefit to voting is approximately zero. Hence the net benefits -- benefits minus costs -- of voting are negative and the rational voter will not bother.

The situation improves slightly if the election outcomes are not viewed strictly in terms of winners and losers, but if the number of votes received by each party is deemed important. On this view of the political process (Stigler (1972)), the goal of political parties is not merely to gain office but to gain influence over public policy. The more votes a party receives, the more influence it has. Unlike the Downsian view, the Stigler view is capable of explaining the existence of minority parties -- parties like the NDP who never appear likely to gain office at the federal level, but gain influence over the political process so long as they receive the votes of a substantial minority of the population. If the Stigler view is adopted, then it is not necessarily irrational to vote, since every vote "counts." The amount of influence is small, but then so is the cost of voting, and no general prediction can be made as to whether the rational voter should vote or not. However, the importance of this qualification should not be exaggerated. In the Downsian view, the voter faces a very small probability of having a very large influence on the outcome of an election; in Stigler's view, the voter has a very large probability of having a very tiny influence. Either way, the impact of a single vote is small, and there will be a tendency for voters to free-ride.

Fortunately, however, this tendency is not borne out by empirical evidence. The paradoxical fact is that most of the time most voters do vote. Moreover, in every other respect, voting

patterns appear to be quite rational: voting turnout is larger in close elections and in elections where the issues are more hotly contested; more educated voters vote more frequently than less educated ones, and so on. To explain the existence of voting, however, it appears that one has to rely on altruism or a sense of civic duty on the part of the electorate, however unpleasant resort to such factors may be.

How does the tendency toward free-riding among voters compare with that among shareholders? There appear to be a number of differences between them. First, free-riding among shareholders favours the status quo. To the extent that existing management can count on shareholders to free-ride during a takeover bid, i.e., not to sell their shares to the group tendering the offer, existing management is protected from takeover. There is no such implication with respect to free-riding in political markets: it favours neither the incumbent nor the opposition. Secondly, the force of altruism or civic duty which mitigates free-riding behaviour in political markets is unlikely to appear in the market for corporate control. Thirdly, voters surely are much more exposed to political information than they are to information concerning how the companies in which they have shares are being managed. In the latter case, the only information available to the small shareholder is the company's annual report, a document produced by the group whose jobs are in question. Voters, on the other hand, are subject to an avalanche of information from many

points of view by the media. The quality of this information may be low but is surely no lower than the typical company annual report. Finally, more accurate information in political markets does not have the perverse quality that information has in the market for corporate control. If voters correctly come to believe that the opposition is better able to run the government than the incumbents, they are more likely to vote for them, rather than less likely to sell their shares to them as is the case in the market for corporate control.

With respect to the costs of organizing a takeover, again the market for political control appears to offer a superior capacity for disciplining incumbent management. Unlike the private sector, managers in the public sector are forced to call elections at predetermined intervals. There is, moreover, a permanent opposition to whom the executive is continuously accountable. The costs of organizing by opposition political parties are heavily subsidized in most democracies. Finally, the incumbent managers must face the opposition in an organized campaign in which the views of contending parties are put forward to the owners and heavily reported by the media. Imagine how much shorter the tenure of chief executives in the private sector would be if they were forced to face the sort of takeover bid that chief executives in the public sector are regularly exposed to!

Of course, private firms unlike public firms are exposed to competition in the market for their products and this can act as a powerful incentive to the managers of private firms, but that is not the issue here. If the difference between the public and the private sector is simply the difference between monopoly and competition, then other factors, such as the difference in ownership between them, are largely irrelevent. Most discussions of the problem of the separation of ownership from control are prefaced by the assumption that product-market competition is imperfect. An alternative view, put forward by Jensen and Meckling (1976), is that if the separation of ownership from control results in considerable managerial discretion, competition in the product market will be imperfect, since managers cannot be counted on to maximize profits, and hence will not compete as vigorously as would owner-managed firms. On either of these grounds, competition in the product market is insufficient to motivate managers to maximize profits, and the issue we are examining is the strength of alternative mechanisms which would protect the owners' interests. And it would appear that elections exercise a more powerful discipline on governing politicians than takeover bids do on managers in the private sector.

(iii) Managerial Competition

The last mechanism to be discussed is competition among managers. The essential argument here can be found at least as far back as Alchian's (1969) paper. An important recent contribution is that by Fama (1980). The basic point made by these authors is sraightforward: the separation of ownership from management presents no difficulty because there is a market for managerial jobs, and this market is competitive. Managers face competition for their jobs both from lower-level managers and from managers in other firms. So managers need not be owners in order for them to be motivated to be efficient. All that is required is that the rewards of managers do depend on their performance so that efficient managers tend, over the longer run, to earn more than inefficient managers -- what Fama calls "ex-post settling up" -- and there be effective competition for managerial jobs. Evidence for the latter proposition is found in the existence of managerial mobility.

Proponents of the managerial competition model do not deny that there are substantial opportunities for managers to pursue growth, sales, leisure or other forms of non-pecuniary consumption. They point out that this must be imputed to the cost to owners (stockholders) of "policing" the management. If the costs to owners of supervising or policing managerial efficiency are high, these writers admit, managers will no doubt have discretion to

pursue their own interests. What they do argue, and in this they are surely correct, is that the existence of such opportunities would not be confused, as it often has been, with monopoly power. If competition for managerial jobs is perfect, managers earn no rents no matter how large their discretionary opportunities. To see this point, suppose that managerial jobs in one particular firm -- firm A -- intrinsically offer more opportunities for discretion than can be found elsewhere. This does not imply that managers in A will earn more rents than managers elsewhere. If managerial wages in firm A were no lower than elsewhere, managers everywhere will want to work for firm A. As a result, managerial wages in A will simply be bid down by competition among managers. In short, opportunities for managerial discretion are identical to other non-pecuniary advantages which sometimes attach to jobs, such as prestige or pleasant working conditions. As in the analysis of any other form of non-pecuniary advantage, the larger are those opportunities, the lower the salaries of managers will be in competitive equilibrium.

To be sure, there are real effects of managerial discretion: the corporate form of organization will be less efficient than it would be if managers could be costlessly policed (the output of corporations from given inputs will be smaller), and the corporate sector itself will be smaller than it otherwise would be. But stockholders will not wear the costs of managerial discretion; managers will "pay" for it themselves in the form of lower wages.

It is not clear whether this theory is meant to be applied to managers at the top (chief executive) level or to managers at lower levels. For the argument to work with respect to chief executives, it must be supplemented by some institutional mechanism by which the contracts of chief executives are renegotiated. The two possibilities here are takeover bids and boards of directors. The first possibility has just been discussed. The weaknesses of the second possibility are well-known. Corporate boards of directors tend to be either relatively passive or management controlled.[6] Consequently, managerial competition would not appear to have much force as a device for disciplining chief executives in the short run. Moreover, for corporations of reasonable size, the salary of chief executives would probably have to be negative in order to compensate owners for even slight deviations from profit maximization on the executive's part.

From a longer-term perspective, however, the general idea that what mainly motivates managers is their future prospects in the managerial market has considerable appeal. Efficient managers will acquire a reputation for efficiency, and executives compete against other executives (including executives in other corporations) in order to acquire a bigger reputation, the value of which is reflected in the salary and other benefits which a successful executive can command in this market.

The same notion has equal force in the market for politicians. Governing or elected politicians may not compete against each other in any direct way, but each has a considerable incentive to perform successfully in office in order to have a change at higher office. Over the longer run, efficient politicians, like efficient executives, can expect to be rewarded by promotion to jobs carrying more prestige, more power, and more income, and these future prospects would appear to be a powerful disciplinary force against the short-run temptations available due to imperfect monitoring on the part of voters or shareholders.

Unfortunately, just how powerful these forces are, and their relative strength in the public and private sectors, is difficult to assess. There are enough examples in both sectors of individuals for whom long-term prospects were obviously not strong enough to deter them from short-term exploitation of their position to know that they are not perfect. However, research into these issues is only just beginning, and it would certainly be premature to draw even hazy conclusions at this point.

Managerial competition may also be an important and underrated force <u>within</u> bureaucracies. For example, whether "the firm" -- the bureaucracy as a whole -- maximizes profits or not clearly depends on its internal organization; i.e., on the incentives to division or bureau heads within the firm, and on the capacity of the chief executive to control and coordinate them. Alchian

and others see competition among managers within the firm as one force promoting profit maximization by the firm itself.

Similar considerations are equally relevant in explaining the behaviour of bureaucrats in the public sector. From the point of view of managerial competition, a government bureaucracy appears to be a competitive labour market, a market in which there is effective competition among subordinates for jobs, and competition among bureaucratic superiors for subordinates. Public managers who do not perform as satisfactorily will be replaced; those who do perform satisfactorily are still under pressure to do better from ambitious underlings, from bureaucrats in other agencies, and from outsiders. Mobility within a bureaucracy such as the Canadian federal government is very high, and the incentive to governing politicians to replace inefficient bureaucrats is obviously strong. In short, there is no reason to believe that the market for managers in the public sector is any less competitive or efficient than the market for corporate managers. Theories of government bureaucracy which attribute monopoly power to heads of bureaus in the public sector, on the ground that no other agency is producing <u>that</u> particular output (e.g., defence, foreign affairs) miss this simple point: the bureau may be a monopoly, but the bureau <u>head</u> is no monopolist.

There is, however, one flaw in the argument that competition among managers eliminates the problem of managerial discretion.

This argument has been made in detail elsewhere (Breton and Wintrobe (1982)), and can only be sketched here. To see the point, suppose that the most important way in which managers can exploit their position vis-à-vis owners is by forming networks within the firm. For example, it is often suggested that "inside" directors on a company's board normally vote as a solid unified block under the direction of top management.[7] If so, they form a network, and these board members will receive something in exchange from top management for this favour. Many other networks exist within the firm and are commonly referred to as an organization's "informal structure." One implication of this line of thought is that networks -- to the extent that they are informed by individuals or groups who are potentially in conflict or competition -- can be utilized to neutralize that competition. Another implication is more subtle. If the rewards to managerial discretion do not primarily arise from one's formal position in the organization but through "membership" in certain networks, then competition for those perquisites will not result in bidding down wages, but in bidding down the rents to network "membership." Competition to get into these networks will result in the elimination of rents to network membership, but it will not diminish -- in fact it enhances -- the power of those networks and their capacity to operate the organization in their own interest rather than the interests of its owners. On this view, competition among managers does not necessarily eliminate the problem of the separation of ownership from control from the private sector, and it

does not eliminate the influence of bureaucrats on public policies on the public sector.

(iv) The Evidence

What can we make then of the massive amount of evidence which documents the inefficiency of public production? These studies tend to show that costs of production tend to be higher in public than in private production when both provide similar services. In part, the error here is also due to the simple confusion between bureaus and bureaucracies. Private firms provide services in economic markets, i.e., to markets in which there is a (more or less) simple exchange of goods for money. Public firms may do this to some extent but, being public, they are subunits of and responsible to the government as a whole, and therefore to the political marketplace (the market for votes) as well.

Since political objectives cannot be realized at zero cost, and since these non-zero costs are included in the measured costs of public firms, these studies reveal nothing about the relative efficiency of public and private firms: one cannot know whether the extra costs incurred are simply the costs of serving these objectives, or a genuine inefficiency.

This point has been made many times before (e.g., Breton (1974), Borcherding (1983)). The authors of many studies suggest that

they have controlled for this factor by pointing out all the ways in which the public and private firms are similar (perhaps the most famous example of this is Davies' study (1971)). However, one could also list all the ways in which a man resembles a woman, and come up with a very long list.

The special difficulty with studying political markets or markets within organizations from an economic point of view is that trades in these markets are often not made in money, often do not take the form of legally enforceable contracts, and certainly do not necessarily appear on balance sheets. For example, Foster (1971, Chapter 5) describes how one can search in vain for a precise statement of the duties of Britain's nationalized industries in the statutes governing them, in White Papers, in ministerial statements, directions to the boards, or anywhere else. He goes on to describe the subtle ways variously described as persuasion, pressure, arm-twisting, informal discussions, and so on, in which ministers exercise their influence over the policies of those industries. And this point, which perhaps needs emphasis in the case of the relatively arm's-length relationship between politicians and government corporations, surely needs none with respect to that between politicians and departmental bureaucrats. In one way, then the error in all of these empirical studies is the same as the error in the theory pointed out earlier: they compare the outputs of bureaus in the public sector entities which even though they may themselves operate in economic

markets, are merely parts of a larger organization -- and responsive to demands originating from the whole organization, with self-contained units or bureaucracies in the private sector.

IV CONCLUSION

The argument of this paper may be summed up as follows. Theoretical comparisons between public and private production in the literature are severely flawed. One simple flaw is that the studies often compare bureaucracies in the private sector to bureaus in the public sector. This leads to simple logical errors such as the allegation that one cannot measure the performance of a public bureau, while one can measure that of a private firm, and so on, and it has led to a large amount of inappropriate empirical work.

Moreover, in both public and private firms, there tends to be a separation of ownership from effective day-to-day control. The extent to which the managers and employees of those firms serve the objectives of their owners therefore depends largely on the availability and strength of the mechanisms available to police the management, and on the degree of control of management over their employees. A number of mechanisms which give management an incentive to act in the owners' interests were examined, and, on balance, it would appear that these mechanisms, if anything, fare better in the public sector, though this conclusion must be severely qualified because of the lack of research -- both theoretical and empirical -- on many of the issues involved. Perhaps, however, it can serve as an antidote to the facile conclusion of "property rights" and other theories which draw the opposite conclusion or the basis of much more limited considerations.

Notes

1 See the recent survey by Borcherding (1983).

2 DeAlessi (1974), p. 7.

3 loc. cit.

4 The growth of public enterprise, on the other hand, is not typically viewed as evidence in favour of its efficiency.

5 Smiley (1976), p. 30.

6 See Herman (1981), Chapter 2, or Report of the Royal Commission on Corporate Concentration (1978), Chapter 12.

7 See Herman (1981), and Royal Commission (1978).

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THE ORGANIZATIONAL (COUNTER)-CULTURE OF STATE-OWNED ENTERPRISES: AN EXPLORATORY STUDY OF THE QUEBEC CASE

by

Daniel Latouche
Department of Political Science
McGill University
University Associate, SECOR Inc.
555, Dorchester ouest, Montréal H2Z 1B1

RÉSUMÉ

L'auteur du présent document examine l'organisation d'un sous-ensemble d'entreprises d'état créées au Québec durant les années 60. Ces sociétés ont été amplement analysées du point de vue de leur contribution au développement économique ou de leurs modes de contrôle par les autorités politiques, mais leur fonctionnement réel à été passablement négligé.

Bien que la principale hypothèse sousjacente à cette recherche n'ait pas été appuyée de preuves empiriques, par exemple, par l'existence d'un ensemble différent d'attitudes et d'un comportement particulier aux directeurs-fonctionnaires, nous avons néanmoins réussi à établir que les directeurs-fonctionnaires actuels du Québec partagent pleinement la culture politique dominante héritée de l'ère de la Révolution tranquille. Contrairement èa ce qu'on aurait pu penser, les sociétés d'état québécoises ne constituent pas un milieu riche en folklore, fables ou mythologie de l'organisation. Les histoires de conflits internes et les légendes de prouesses passées sont rares, sauf évidemment dans le cas d'Hydro-Québec, la doyenne des sociétés d'état de cette province. Cette culture organisationnelle sans éclat est considérée comme une indication de la symbiose générale liant les sociétés d'état à leur environnement socioéconomique.

ABSTRACT

This paper looks at the organizational culture of a subset of state enterprises created in Québec during the 1960's. These sociétés d'état have been the subject of much analysis as to their contribution to economic development or their modes of control by political authorities, but their actual functioning has been largely neglected.

Although the major hypothesis behind this research has not been supported by empirical evidence, i.e. the existence of a differentiated set of attitudes and behavior specific to state managers, we have nevertheless been able to document that Québec state managers fully share in the dominant political culture of the post-Queit Revolution era. Contrary to expectations, Québec state societies prove not to be a milieu rich in organizational tales, folklore and mythologies. Stories of internal conflicts and legends of past accomplishments were rare (except in the case of Hydro-Québec of course, the dean of Québec state society). This bland organizational culture was seen as an indication of the overall symbiosis existing between the sociétés d'état and their socio-economic environment.

INTRODUCTION

As an area of research, state-owned enterprises can no longer be considered frontier territory. Even in Canada! The field has now reached this rare junction where provocative remise-en-question are premature and unfair, but where integrative theories are not yet possible.[1] The landscape is sufficiently well-charted that a reliable body of literature has been made available for criticism, but is still only so primitively groomed that attractive new directions of research can be suggested with relatively high expectations of productivity.

In the life of any issue area, this is a privileged moment, never to come back again. One can be bold and suggest new avenues to explore while not being expected to fill the gaps entirely. In this paper, we will make use of the concept of "organizational culture" to consider the internal dynamics of state-owned enterprises (SOEs), their functioning and, most of all, the operational grid of their managers. Our objective is a modest one: can we find similarities and continuities in the attitudes, values and behaviour of those managing Quebec public corporations. How do they look and feel about themselves, their enterprise and the world? How do they organize these perceptions into a coherent set? What is the source of this coherence? Can a link be established between this operational grid and the sociopolitical context of the last decade?

DO WE ALREADY KNOW TOO MUCH ABOUT STATE ENTERPRISES?

In recent years, SOEs have received considerable attention as to their origins and their contribution to the overall economic development, performance, legal status and the forms of control exerted over them by various political bodies.[2] Over the years, two variables have been singled out for a more detailed examination, politico-judicial control and socioeconomic efficiency, the first one as the independent variable, the other as the dependent one.[3]

For better or worse, these two concerns, control and effectiveness, are considered to be intrinsically linked. In fact, the race has been on for some time to find the magic formula that would reconcile two apparently mutually exclusive objectives: how to make SOEs more sensitive to the will of elected representatives while making sure these enterprises meet both their economic and social responsibilities.[4]

To say that the management and the internal operations of SOEs have not been the subject of any scholarly attention is, of course, an exaggeration. In fact, they have been the subject of almost too much attention, but, obviously, not the right one! The following review of four distinct "schools"[5] of thought on the

matter does not do them justice entirely, but it allows for the collecting of hypotheses and propositions to which we will come back later.

a) State-owned enterprises as administrative bureaucracies

State-owned enterprises have been a favorite laboratory for many landmark studies of administrative bureaucracies. Herbert Simon's (1945) Administrative Behavior is based on numerous examples from government and public bureaucracies. Philip Selznick (1957; 1966) made considerable use of The Tennessee Valley Authority in his attempt to formalize a theory of administrative leadership. Michel Crozier (1964; 1967) also made frequent references to the vast number of French SOEs in his attempt to unearth a French bureaucratic style.[6] But these researchers pay relatively little attention to the public "personality" of these organizations. Their objective is not to discover if management of public enterprises is a different proposition altogether, but to make generalizations applicable to all administrative organizations.

b) State-owned enterprises as economic organizations

Other organizational theorists have dealt more specifically with state enterprises. Here, board of directors and their impact on the SOE has attracted special attention. R. Bachand (1981), Peterson (1977), and H. Raiffa (1981) have concluded that boards

rarely play a very important role, no more so than in the private sector, but that when they do, they serve as a forum for the expression and conciliation of various views and rarely as a conduit for government directives.

Y. Aharoni (1981; 1981b) has dealt extensively with the question of management discretion in SOEs. He lists 12 variables which are said to affect the degree of freedom enjoyed by public managers:

1) the degree of dependence on the government;
2) the legal organization of the firm;
3) the percentage of government ownership;
4) the costs of monitoring the SOEs;
5) the costs of replacing a manager;
6) any change in political leadership;
7) the market structure;
8) the perceived obligation of the firm to serve all demands;
9) the degree of perceived goal congruence between the government and the firm;
10) the degree of internationalization;
11) the number of customers and products; and
12) the information input (Aharoni, 1981b).

Consequently, state managers will make use of various strategies and tactics to avoid government control and interference:

1) giving sequential attention to the demands of outside groups;
2) playing one group against the other;
3) controlling the expression of new demands;
4) contending that strong external demands have to be satisfied;
5) controlling information;
6) playing the game of splendid isolation;
7) running a profitable operation;
8) diversifying;
9) demanding a quid pro quo when government puts pressure;
10) investing abroad;
11) taking part in the formulation of demands; and
12) co-optation and political lobbying.

Writing from a political economy perspective, P. Faucher makes the same point: SOEs managers usually succeed in using their middle position between the private and the public sector to enhance their autonomy.

> "Les administrateurs des entreprises d'État s'approprient et utilisent l'espace identifié entre l'économie publique et l'économie privée comme champ de manoeuvre pour faire échec tant à l'influence du secteur privé qu'aux contrôles bureaucratiques du gouvernement. Cet espace qui devait permettre la mise en place d'une stratégie d'intervention se voit confisquée par la bureaucratie dans sa volonté d'autonomie. Voilà ce qui explique la lutte constante entre les administrateurs qui veulent accroître leur pouvoir discrétionnaire et les représentants politiques qui souhaitent exercer davantage de contrôle sur l'activité des

> entreprises publiques" (Faucher, 1981, p. 27).

Because of this autonomy, public enterprises rarely succeed in being the privileged instruments of economic development, especially in developing countries.

Clearly, Aharoni cannot be criticized for not paying attention to the managerial side of SOEs. But it is difficult to believe that an increase in "managerial discretion" can be such an overwhelming and automatic concern as he so easily assumes.

The most detailed study of the inner workings of SOEs remains that of Taieb Hafsi (1981) who has managed both to provide a theoretical model and carry out a comparative analysis of SOEs in three countries: France, Algeria and Canada. The model describes two basic processes which are believed to take place when a SOE must make a strategic decision.[7] The core process describes what happens inside the firm, the boundary process treats the firm as a unit in a wider environment peopled by other units and by government, which is often the ultimate decision-making authority. For both, each processes a number of subprocesses are identified:

1) feeler, or initiation subprocess, through which new ideas are generated;

2) a problem-solving subprocess, including
   - definition and search for alternatives
   - gathering of support and commitment
   - selection of a policy
   - implementation;

3) a management of context subprocesses to influence the behaviour of target population.

After reviewing important strategic decisions,[8] Hafsi is led to conclude that the context in which these processes operated is the most discriminating factor, much more so than the type of SOE and decision involved. As a rule, the more precise and united the political context, the more any government intervention can be met effectively. Again, we encounter this belief mentioned earlier that if public managers are told what is expected of them, the better their performance will be.

Finally, he suggests an evolutionary model of state-SOE relationships which closely resemble its life-cycle counterpart from the marketing world. During the growth phase of any SOE, its objectives are determined by the government, and the responsibility of managers is to understand and translate them into operational goals. It is a trial-and-error process, often complicated by the government's inconsistencies and heterogeneity, which leads the firm to "realize the virtues of internally controlled

objectives consistent with the firm's mission and subject to the managers' interpretations" (Hafsi, 1981, p. 496). In the mature phase, the relationship becomes an adversarial one as the SOE tries to keep government at arm's-length. In the decline stage, the government has usually lost all control over the SOE. In most cases, the firm is not even regulated by the state, its managers have fewer constraints than in the private sector: "The firm derives legitimacy from internalizing the value for which it is supposed to stand, and the independent, yet publicized, pursuit of these values" (Hafsi, p. 497).[9]

Hafsi's approach is essentially concerned with the process of decision-making. His objective is to identify each and every step of this process, their articulation and cross-impact. He hopes to arrive, and to some extent he succeeds, at standard guide of operations for state managers. But he tells us very little of these managers, except to mention that not unlike those in the private sector, they are also motivated by self-interest and a desire to increase their power within the organization. They will succeed or not, depending on the amount of uncertainty they can reduce on their level of expertise and on their personality. Somewhat unconvincingly, he suggests they should come equipped to carry on successfully the feeler function and take the lead in managing the context of the decision taken.[10]

This focus on strategic decision-making provides Hafsi with a privileged vista to view SOEs, but it is a biased one, almost too enriched. Most of what goes on in SOEs, as in any organization, has very little to do with strategic decisions, even in the case of senior management. The stakes, the battles and the anguish are more mundane. The struggle for autonomy, assuming that there is such an ongoing struggle, takes place in the mud of bureaucratic trenches and not in the open-skies of theoretical models. In the end, Hafsi's preoccupation with strategic moments of truth, those which make or break an organization, leads him to an almost exclusive concern with government-SOEs relationships. In his view, SOEs have processes and interactions, but they have no texture. The environment and its relationships with the organization is the only viewpoint.

c) State-owned enterprises as free-riders

The property rights school is best known for its "pay, power and prestige" hypothesis. If there are indeed objectives of managers in public corporations, one is at lost to explain how even a few SOEs manage to survive. The property rights argument with regard to the management of state enterprises is a simple one.

The electorate is the effective owner of public corporations. With such a diffuse ownership, and one which can assert its rights only every four years, the managers face little constraints. But

since they have no equity involvement, they also have no incentives to take risks and be efficient. Their major concern becomes a mixture of survival, independence and personal benefits. Overproduction, inefficient allocation of resources, ignorance of real service costs, lack of concern for clients, temptation to increase capacity, undifferentiated pricing structure, and smaller product variety become the rule of the day.[11]

d) State-owned enterprises as coalition builders

The public choice school is less concerned with comparative efficiencies of public and private enterprises than with the output of the bureaucratic mode of management from which public enterprises cannot escape. In his classic study, Niskanen (1971) fully accepts the idea that public managers will strive for the 3Ps. This obsession, he suggests, has important consequences on the budget and program processes of the enterprise. From this preoccupation emerges a model of the relationship between public enterprises (or bureaucracies) and their political environment. Not only is this environment not considered a hostile force, as is often the case among property rights advocate, but it is there to be used by public managers.

Among the major propositions of this model, some have a more managerial overtone and should be mentioned:

- special relationships will tend to develop between managers and those groups who support the raison-d'être of the enterprise and its continuous growth;[12]

- coalitions will set with those parties and members of the legislative bodies who have an interest in growth;

- programs will be constructed in a "take-it-or-leave-it" way so as to minimize the chances of being turned down; and

- the support of employee unions (and of their own political affairs) will be enlisted so as to accentuate the growth-push and the labour-intensity of public enterprises.

THE SAD WORLD OF STATE-OWNED ENTERPRISES

As a rule, the reluctance of the "real world" to confirm these and other hypotheses has not prevented the emergence of an overall negative image of the state-owned enterprise. For different reasons, some theoretical and some more ideological, SOEs are often assumed to be management aberrations imposed by political considerations for which we all pay a high economic price.[13] Management horror stories abound and seem to confirm that only a shock treatment, presumably that provided by privatization, will modify this sorry state of affair.

In the end, a direct and positive relationship between external political control and effective internal management is almost automatically posited. Except for those who have come to favor their brutal elimination, the hypothesis that attempts at improving the accountability of SOEs would make matters worse or, at best, be totally ineffective, has not been seriously considered. Instead, it is suggested, almost ad nauseam, that a better codification of control mechanisms (an euphemism for "more" or "no" control at all, depending on the viewpoint) will contribute to clear the air and thus allow managers to do a better job. The more managers know what is expected of them and how their performance will be assessed, the better that performance and that of their enterprise will be. Once this area of uncertainty has been reduced, managers, it is assumed, will perform like rational actors, a situation which they always aspired to and were prevented from reaching because of unreasonable and unclear expectations.[14]

Don't accountability and profitability go hand in hand?[15]

When this uncertainty is removed and their performance is measured realistically, i.e., taking into account both the profit parameter and the social missions of the enterprise, the SOE problem will dissolve itself. So much so, many argued, that the uselessness of these state-owned enterprises will then become apparent. Their so-called social missions, and certainly their

profitability, will be exposed as cover-up for the insatiable appetite of bureaucrats always in search of more power and a wider ice rink. And then, not only the problem, but also SOEs themselves will fade away (Carter, 1983).

It is indeed difficult to gain respect for SOEs managers as they appeared in some of this literature. For some, they are either a collection of nice people, constantly harassed by incoherent politicians and who are prevented from doing their job. For others, they are but a collection of cynical and self-centered technocrats who take no small pleasure in seeing their organization go deeper in the morass of irrationality. In some other circles, state enterprises are seen as the breeding ground for a new statist elite, educated in the best school and coming from the right background, and which cannot be differentiated from their colleagues in the private sector.

Can things be so bad that the only preoccupation of all these managers is to increase the autonomy of their enterprise while the sole obsession of their government is to make sure they are effectively controlled?

This study is an attempt to move away from this suspicious unanimity. After all, SOEs do exist, make money, fulfill social goals, and are often efficiently -- and one is tempted to say "happily" -- managed. Someone out there must be doing something

right, and not just repeating the usual pronouncements about collective responsibilities and national sovereignty.

THE ORGANIZATIONAL CULTURE APPROACH

This approach is sufficiently well known that a detailed presentation is no longer required (Pettigrew, 1979; Turner, 1971; Smircich, 1983). Organizations, especially large-scale organizations, are not simply the sum of their structures, subsystems and individuals. Something binds these elements together so that each organization develops a particular way of doing things, or, in the words of Talcott Parsons, of "producing that identifiable something" which characterizes each organization. "Call it style, if you want!"

Organizations, or at least people who manage and speak for them, have goals, go through life cycles and are plagued with growth and decay problems. They have their own socialization processes, norms and past (Rice, 1963; Silverman, 1970; Aldrich, 1979).

Definitions of organizational culture abound. We will build on that of Eldridge and Crombie (1974) and define organizational culture as a configuration of shared meanings, symbols and cognitions that characterize the manner in which groups and individuals in a given organization combine to get things done and maximize their own rewards. As such, the organizational culture defines

the "soft" side of any organization, its texture rather than its structures.

This configuration may be unique to each organization, but it does not come about in a vacuum. As suggested by Meyer and Rowan (1977, p. 346), organizations are dramatic enactments of rationalized myths pervading modern societies. Close association with the ambiant society is not only a source of cultural material, it also offers legitimization for the organization's goals and methods. The organizational culture of an enterprise allows it to conduct these symbolic transactions with the environment while managing the demands and impact of environmental changes.

The components of each organizational culture vary also immensely; so does their dynamics, interactions, impact and sensitivity to change. The ingredients put in each cultural bag are as diverse as the chefs presiding over the use of the concept. Some observers insist on the myths and rituals (Mitroff and Killman, 1976; Dandridge, 1979; Dandridge, Mitroff and Joyce, 1980); others on signs, material or ideational. Stories and tales (Martin, 1982), communications, heroes, conflicts, tribes and leaders can all be seen as the stuff of which organizational cultures are made.

Although the concept is relatively new and still used with much enthusiasm, the first cracks, both theoretical and methodological,

have began to appear. Some of the popular literature on organizational culture (Deal, 1982; Peters and Waterman, 1982) would have us believe that is sufficient to "land" in an organization with the proper ethnographic research instruments and mental dispositions for the culture of the organization to spring to life, if not into our face. The organizational culture is there to be taken, just as in an Eskimo village. Wilkins and Ouchi (1983) have underlined the dangers of this ethnographical fallacy. Numerous organizations, often large ones, are so socially and geographically fragmented that they do not provide a sufficient critical mass of exchanges and transactions for the development of the enculturation process without which there can be no culture. Long history, stable membership, the absence of institutional alternatives which can "distract" individuals from their organization, and the actual possibilities of interactions between members of the organization are prerequisites to the formation of any organizational culture (Sandy, 1979). They are not always present together.

Even when such a culture emerges, the relationship between organizational performance and the content of such culture is neither as evident or as unidirectional as is often assumed (Schwartz and Davis, 1981). A strong and well-defined organizational culture does not always produce results Japanese-style. It can serve to inhibit change and adaptation. How to manage corporate cultures is no easy task either (Baker, 1980) and the

advice that managers should be adept at symbolic manageering is easier given than taken (Pfeffer, 1981; Smircich, 1983; Peters, 1978).

As suggested by Y. Allaire and M. Firsirotu (1981), biomorphic and anthropomorphic analogies between organizational and social cultures are more a nuisance than a help. We will follow the operational grid which they have suggested in a number of theoretical and applied studies and consider the organizational culture of an enterprise as that which allows:

- the individual to interpret correctly the demands and make sense of the interactions between himself, colleagues, "strangers" and the organization;

- all participants to be cued as to what is expected of them and thus learn the rules of the game;

- the organization to learn by acting as a collective memory where the information capital is processed and stored. This memory makes it possible for the organization to be more than the simple sum of its participants. Without this memory, each participant's experiences could not be integrated within the strivings and objectives of the organization (Argyris and Schon, 1978);

- the organization to constantly recreate the commitment of its members by interpreting for them what is going on in the world;

- the coalescing of the actors' micromotives within and the organizational macrodesign and behaviour. Without a culture, the individual preferences functions cannot be effectively aggregated.[16]

Before Canadian politicians seriously embark in their privatization debate, more attention should be paid to the cultures of those selected few enterprises which have already been targeted for "liberation." If indeed managerial discretion is the only obsession of SOE managers, this privatization should be achieved without much difficulty. No longer required to imagine strategies to prevent governmental interference, those managers will be free, free at last, to give their full measure in response to markets which will finally be allowed to perform their regulatory role. But what if managerial discretion is not the only goal.

DATA AND METHODOLOGY

The material for this article was assembled through a series of interviews with officers of eight Quebec government-owned enterprises (most of them, but not all, in the industrial sector). Peripheral involvement as an outside consultant in the strategic planning process of two Quebec SOEs provided further material.

The financial statements (Quebec, 1983; 1984) prepared by the Ministre des Finances on government enterprises lists 48 such concerns, undoubtedly the largest collection of provincial SOEs in Canada. They range from Hydro-Québec and its 19,000 employees to the Régie du Grand Théâtre de Québec with less than three dozens. The diversity of their origins, legal status and organizational history as well as their importance in Quebec's economic and political development has been documented (Fournier, 1978; Parenteau, 1980b). Their actual functioning remains nevertheless an enigma. A. Bachand (1981), F. Bernard (1983), and A. Hubert (1983) have studied the make-up of their boards. D. Grenier (1974) and A. Chanlat (1984) have looked at the organizational history of Hydro-Québec. But for the rest, the concern has been here also with accountability and economic alternatives (Parenteau, 1980a).

By now, the preliminary nature of these findings as well as their speculative nature should have become evident.[17] Our pretention to take into account a number of SOEs presumes that this organizational culture is a collective enterprise and that certain traits are to be found in all Quebec SOEs. Although not entirely unjustified, this assumption should not obscure the fact that the idiosyncracies of each organizational culture are undoubtedly more relevant to the understanding of each SOE.

Also to be mentioned is the fact that the immediate political environment of these SOEs is that of Quebec. Should we say more! The extreme politicization of this environment, the interventionist nature of all Quebec governments since 1960, the sudden political turnovers, all of this defines a very turbulent environment. The uniqueness of this content can be seen either as a deterrent to any generalizations or as a particularly fertile ground from which numerous insights and hypotheses can be developed.[18]

All of the state enterprises under study operate at a provincial level. But the subordinate nature of the political system has no immediate impact on their status and internal structure (except for their lack of international orientation). The Quebec government occupies almost entirely all of their external political environment and none of them has extensive dealings with federal authorities. Except for the Caisse de dépôts et placements, none of the sociétés d'État has been involved in serious federal-provincial disputes, a rare accomplishment in Quebec.

THE REAL WORLD OF QUEBEC SOEs

Before undertaking this brief excursion in the empirical world of Quebec SOEs, we had built an image of what we expected to find. Is there any other way to travel academically? This image closely reflected the propositions found in the literature and which

have come to sprinkle the public debate on the role of the state and the privatization of the economy. Among other things, we expected to find a culture or at least a managerial style based on:

- a well-developed organizational memory filled with tales, myths, legends and rituals;

- a list of heroes and villains;

- a clear image of the "success ladder" and the danger traps;

- a well-defined and comfortable self-image;

- a well-established socialization process;

- a shared vision of the formal and informal authority structure;

- a shared vision of all major actors in the environment;

- a number of internal power struggles, past and present, made even more intense by the proximity to the political apparatus and the societal involvement of the SOE;

- an identifiable set of values which, although not equally shared by all, nevertheless act as a focus around which actions and counteractions are organized; and

- a set of internalized conflicts, real or apprehended, with the government over the autonomy of the SOE.

On the other end, we had no clear expectations as to the functionality and coherence of this managerial style, its compatibility with the non-profit missions of the SOE, its adaptability to a changing environment and its impact on the performance of the enterprise. But clearly, as the previous review of the literature suggested, it was expected (and hoped) that things could not be so bad and so unilinear as some have come to suggest.

One can easily guess that the rest of this paper is a story in disappointment which contrasts vividly with the success stories normally encountered among academic papers. Rarely has an exploratory study so well bore its name. On the other hand, the vision thus provided on Quebec sociétés d'État and more generally on Quebec society as a whole, is a challenging one.

CAN THERE BE LIFE WITHOUT MEMORY

The most striking finding of this exploratory study is without doubt the shallow organizational memory to be found in most Quebec SOEs. As a rule, our respondents show no intimate knowledge with the history, big and small, of their SOE. They have little tales to tell, no small talk to offer. Personal anecdotes abound but it is difficult to provide them with any organizational meaning. They are rarely shared. Of course, the fact that most of those interviewed were not present at the SOE creation and were not privy to rumors and manoeuvers explains this lack of knowledge, but the extent of their detachment was surprising. They seem to care very little about the organizational birth of their SOE and even less about how it was in the "good old days." A strong and active organizational memory is simply not present, or if it is, then it is rarely called upon as a prism to view the organization and summarizes its history. In most cases, there seem to be no such history, a fact that bother our respondents very little.

Although we should be very careful before even thinking about generalizations, it was found that many of the tales that readily came to the surface usually have to do with past strikes and labour conflicts. The attitudes and strategies of management, and the reactions of the government, are the central element of the little organizational memory there is.

As can be expected, Hydro-Québec constitutes an exception to this memory-starved environment. Only an in-depth study could reveal all the mythical density of this mammoth organization. But preliminary contacts reveal that most of them are related to the engineering activities of the firm. Outside of the "Génie" division, the folklore is not as rich, probably because these functions have always played an incidental role in the development of the organization. Stories abound as to René Lévesque, the first strike, the nationalization and, interestingly enough, the various media campaigns of Hydro-Québec. But all of these tales belong to the Quebec collective memory. The firm has no monopoly on them. In fact, one interesting aspect of Hydro-Quebec is its close integration in the mythical world of Quebec which seems to have taken over Hydro-Québec. Clearly, Hydro-Québec is a "catégorie à part."

In no instances did we encounter any trace of what E.B. Lewis (1980) refers to as "public entrepreneurs" along the pattern of Hyman Rickover (U.S. atomic navy), E.J. Hoover (FBI), Robert Moses (New York State). There has been no Maurice Strong either. A public entrepreneur has been defined as someone "who creates or profoundly elaborates a public organization so as to alter greatly the existing pattern of allocation of scarce resources" (p. 9). Such persons arise, Lewis contends, in those situations which contains contradictory mixes of values received from the past and which the entrepreneurs can exploit. To succeed, they engage in

various strategies of organizational design to achieve a high degree of autonomy and flexibility for their organization (and themselves) while at the same time preserving at all cost outside interference with the core of their organization and making sure that the latter is in tune with the needs, wants, values, goals and objectives of the task environment.

The failure of any public entrepreneurs to emerge remains on the most intriguing aspects of the Quebec case. Certainly all the structural conditions mentioned by Lewis have been present in post-1960 Quebec: political upheaval, a reformist movement, a strong belief in the primacy of merit, increased administrative resources, commitment to technical expertise, increased specialization of task and person, emergence of new elites, increased slack in organizational resources, acceleration in the division of economic and political labour, etc...

Even Hydro-Québec, the SOE of SOEs, has never been the "property" of a single individual. It has repeatedly been referred to as "a state within the state," but never as anybody's personal turf. Looking over the names of present and past presidents of Quebec SOEs, no single name will come up, although some of these organizations were created under a lot of public scrutiny and after much public debates. Some have become success stories in their own name (Caisse de dépôts, REXFOR) or have become important in the daily lives of all Quebeckers (Société des alcools, Régie

de l'assurance-automobile). No political career has been launched, or broken, with a SOE. Contrary to France, no grand patron has ever emerged to write a book about his experience.

In many administrative areas, the political and administrative "slack" available was more than sufficient. But no public entrepreneurs step forward to make use of these resources. No one at Hydro-Québec could use the energy crisis to reorient the organization and redirect the allocation of collective resources. Instead, the Société de développement de la Baie James was given control over the James Bay project while SOQUIP became involved in oil and gas exploration. Not only did Hydro-Québec not benefit from the energy crisis, but it had to undergo a direct attack on its technical core.

Radio-Québec which, from the start, enjoyed active political support, federal-provincial conflicts of jurisdiction, an insatiable demand for more television (especially in French), and a well-established tradition (the BBC syndrome) on non-governmental interference, could not translate these advantages into a rich breeding ground for a public entrepreneur. In the case of Radio-Québec, this failure is even more noticeable under a media and culture-oriented government as that of the Parti québécois. Today, it is one of the more likely candidates for privatization, not so much because of its performance, but perhaps of a changed

environment which includes the setting-up of a new French network in Montreal and possible C.R.T.C. difficulties.

Of course, some SOEs have been plagued with problems and have managed to fail both on the profitability of social responsibility count, but such "failures" have not (yet) been the starting point of any "redressment" success story by a savior-type public entrepreneur. Such SOEs have been allowed to degenerate to a point where corruption (Société d'habitation du Québec) and confusion of objectives (Régie des installations olympiques) have become the norm. But those situations are more typical of those SOE which were created for political reasons in the first place.[19]

It is likely that were we to probe deeper and deeper in those organizations, tales and legends would be found. If there are closets, there must be skeletons! But why are they buried so deep and what are the consequences of such a burial?

Martin (1983) and Clark (1972) have suggested that it is through tales that organization lays claim to their uniqueness. Martin lists seven kinds of stories which all offer self-enhancing explanations and rationalizations for past organizational events ("The little man reaching for the top," "The way the organization deals with layoffs," "The way it reacts to mistakes," "How it deals with obstacles," etc.). These stories summarize the organizational way of doing things. They are encapsuled statement about

the past and the future. They carried with them overall value-judgments about the organization.

One explanation for the lack of organizational memory to be found in most Quebec SOEs might simply be that they have yet to encounter sufficient "stimulation" from the environment. Two SOEs, Hydro-Québec and Radio-Québec, are presently in the midst of serious internal upheavals (layoffs, financial restrictions...). First, rumours then tales and finally full-fledged legends are usually the consequences of such turbulence.

For obvious reasons, the literature is silent on those situations empty of stories. Non-events are difficult and uninteresting to research. But can an organization survive very long and perform effectively without a claim to uniqueness? We would suggest it does, providing it has access to stories and legends which might not be unique to the organization but in which it can see a role for itself. Such meta-stories usually come by the name of ideologies. One of the conclusions of this preliminary study is to suggest that Quebec SOEs can be understood only within the larger ideological context of Quebec.

PEACE WITHIN

Even since Bacharach (1980), it has become almost impossible not to stress the power and conflict dimensions of organization. Rejecting the over-Weberian approach of Blau and Schoenherr (1971), Hage and Aiken (1970) and Pugh (1968), these organizational sociologists insist that organizations are best conceived as political bargaining systems within which interest groups, work groups and coalitions vie for power. This approach, they suggest, is the best antidote to the unreal vision of the organization as a rational system of interdependent units held together by a common goal. This perspective assumes a uniform effect of structure and process across the organization.

A vision which stresses integration, differentiation and specialization has less appeal than one which insists on bargaining, conflicts, coalitions and power. There can be no doubt that any organization can be described accurately through its conflicts. But it seems that Quebec industrial SOEs are not the conflictual fertile ground that one could have been led to expect. At first, this will come as a surprise, but is it really?

On this point, the experience of those participants interviewed is supported by the official history of these SOEs. Since 1963, there have been few or no instances of putches, revolts, firings and mass resignations. The front of state-owned enterprises has

been a relatively quiet one. There are no heroic stories to be told of bloody takeovers and move-overs. Succession crises have rarely taken place. So have palace revolts.[20]

There are a number of possible explanations to this power-poor environment (assuming, of course, it is no mere epiphenomenon due to the selection of those interviewed). One of them has to do with the possible sources of power within any organization. There are two basic definitions of power: one which stresses the interactional aspect ("power as a characteristic of an interaction between individuals"), the other, the more structural framework ("power as the capacity of a system to actualize its interests"). In the latter case, power is used in the same sense as one talks of the power, expressed in horsepowers, of a machine. Could it be that Quebec SOEs, because of the peculiarities of their mandate and of their environment, are simply not capable of this actualization of interests and consequently offer little stakes for interactive power relationships to take place? Of course, the density of personal interactions taken place in a Quebec SOE is probably not significantly lower than in any other organization. There is no reason to believe that office and social contacts are less intensive here than in Washington or Paris. But it would appear that these personal drama do not reach the collective public state. One is struck by the relative unanimity of the respondents as to the expressed mission, strategy and overall structure of their organization. Of course, it is always possible that they

would be reluctant to mention any divergence in front of a "stranger," but this reluctance alone cannot explain this acquiescence.

Could it be also that a high level of uncertainty, the high degree of substitutability and the difficulty of successfully coping with both conditions, all contribute to the maintenance of a weak power field within Quebec SOEs? Such would indeed by the hypothesis suggested by the "power" school of organization (Hickson, 1971; Goldner, 1970; Thompson, 1967). In these circumstances, the size of the dominant coalition usually increases considerably, to a point where even the idea of a coalition makes little sense. The more uncertain the technology of an organization and the greater the sources of uncertainty in the organization's task environment, the more can we expect to find power bases and claims at indispensable expertise within an organization. What was taken for a low level of power may in fact be a high degree of diffusion and balance in the distribution of this power.

Could it be then that Quebec SOEs have benefitted from such a favorable perception that they have never been confronted with any real situation of uncertainty, until today that is?

Very often government-SOE conflicts come about because of certain governmental nominations and direct pressures on boards of

directors and high-level managers. Explosive situations can come about if the proper mixture of personality conflicts, political differences and divergent organization viewpoints all coalesce. In the Quebec case, this has clearly not happened. Preliminary studies of the board of directors of SOEs show remarkable similarities between the background of high-level managers, board members, civil servants and even politicians. In this case, one can truly speak of an "elite in power." For example, board members are usually selected when they are 45 years old. They are exclusively male (99 per cent), French-speaking (84 per cent), and university-educated (83 per cent). Close to 50 of them already come from the public or para-public sector. For those who come from the private sector, this membership on an SOE board is usually the first step in a new public career (Bernard, 1981). The difficulties of recruiting managerial talents at a time when they are in high demand and short supply has certainly prevented latent conflicts from surfacing. In most situations, the Quebec governments have had little choice as to who they could name on the boards of their SOEs. It is no mere coincidence if the present PQ government-appointed two well-known liberal figures, one having served as Secretary General of the government and the other as Secretary General of the Treasury Board under the Bourassa administration, to head the two largest SOEs, Hydro-Québec and SGF. When talent is in short supply, choices are easier to make and easier to live with.

Finally, an important distinction should be made between a turbulent, conflict-prove environment and a tense or rigid environment. Michel Crozier has referred to the French sociopolitical environment as being that of a "société bloquée." Whatever it has been since 1960, Quebec is certainly no "société bloquée." Conflicts and the political arenas as well as the political tools (parties) to express them have been numerous. But with the exception of a brief terrorist interlude, these conflicts have contributed to building and supporting the existing regime rather than being a threat to its stability. The fidelity to QUEBEC INC. has been overwhelming. The belief that all, whatever their political and ideological positions, were contributing to this nation-building process was a widely shared one.

As such political conflicts have found little room to infiltrate within SOEs or the various state apparatus, they could express themselves in all their splendor in the theatre of official politics. We have found no SOE split along political (liberal vs pequiste, conservative vs socialist) lines.

WHERE HAVE ALL THE CONFLICTS GONE?

Maybe the managers of Quebec SOEs are incredibly shy and subjugated, or they have been very effective in maintaining a high degree of managerial discretion. As such, they are rarely tempted to see the government-SOE relationship as a conflictual one.

Disagreements and differences are not cast in the same vivid terms as encountered in the SOE literature (Anastassopoulos, 1981). Even in the case of Hydro-Québec where the potential for conflicts has been high and the disagreements have concerned not only the place of Hydro but its "way of doing things" as well, the battle never escalated to the level of an all-out struggle to "save" Hydro.

Incidents of SOE-government conflicts have been rare, much more so than in Ottawa. On those few occasions when SOEs appear to have resorted to the tactic of publishing their own development plan and various orientation papers, they have usually been well-received and often transformed post-facto into government policy. This has been the case recently with REXFOR which has had no difficulty in convincing the government of "re-discovering" the economic importance of forestry. As for government, it has had no difficulty in convincing its SOEs to adopt an all-out approach to their development.[21]

How can we explain this weak conflictual relationship (assuming...). At a very simple level, one could suggest that the grounds for conflict have been rare since there are few commercial SOEs of the CN or Air Canada type among Quebec SOEs. Or, could it be that conflicts do in fact exist but are solved, or at least managed, both formally or informally. The ideological unity and

the personnel cross-breedings have no doubt facilitated this process.

One obvious reason -- or manifestation -- for this rather peaceful coexistence is the surprisingly low level of attention paid by various Quebec governments to their SOEs. In his massive Énoncé de politique économique, the Parti québécois government makes no mention of SOEs (Quebec, 1979). There is simply no room for SOEs, neither in the analysis of the shortcomings of the Quebec economy, nor in the numerous proposals for actions. Individual SOEs are occasionally mentioned but there is no mention of any desire of using them collectively as an instrument of economic redeployment. On the part of an interventionist and social-democrat government this benign neglect is surprising. Such neglect is simply the expression that the role and importance is something which va de soi. Until very recently, no questions were asked and no answers were thus given.

Until 1982, a Secrétariat aux relations entre le gouvernement et les sociétés d'État existed within the apparatus of the Secrétaire général du Conseil exécutif. Responsible for establishing a coordinated approach towards SOEs, the Secrétariat succeeded in obtaining cabinet approval for a policy which imposed on the sociétés d'État to present, for approval, their development plans. In 1982, the Secrétariat was abolished and it appears that the internal battle between the Department of Finance and that of

Trade and Commerce for control over the Quebec SOEs is not yet over. The fact that the "victor" in this battle will also inherit the political responsibility of terminating the activities of SIDBEC, the steel-integrated complex which has so far lost more than $350 million, is undoubtedly responsible in part for this hesitation. Except for SIDBEC, whose moment of truth is said to be near, staffing has been the major governmental concern with regard to SOEs.[22]

This benign neglect has created an atmosphere where no formal set of rules and expectations govern SOE-government relationships. There is no public debate on the question. No White Paper or Royal Commission has ever considered the issue. The contrast with the United Kingdom is a startling one. Following the 1967 White Paper on the subject, there was a Select Committee Report in 1974, an official inquiry of the National Economic Development Office in 1976 and another White Paper in 1978. The election of the Thatcher government in 1979 modified once again the rules of the game. These shifting positions have served as benchmarks against which to evaluate intentions and results, a destabilizing process if there is one.

The absence of public entrepreneurs and of any government-union links should also be mentioned. In France and the United Kingdom, the close relationships between left-wing parties and trade unions is often a reason not only for a closer involvement of government,

but also for the ensuing politicization of any SOE-government conflict.

ARE QUEBEC SOEs IN SOME ORGANIZATIONAL LIMBO?

Clearly, we have found nothing which we expected to find. Maybe we did not look in the right place for those legends, power, conflicts, values and images which usually make up organizational cultures. Maybe we look for the wrong legends...

Nevertheless, one is struck by the similarities of responses, or non-responses, as one travels from one Quebec SOE to another. What is striking is the similarity in the assessment of the socio-economic context in which the particular SOE, and for that matter, all Quebec SOEs, must operate.

When referring to the origins of their SOE or its organizational development, the specificity of the Quebec context comes out as the dominant tale, to be told again and again. The absence of local French capital, of local expertise, of entrepreneurship, of a risk mentality, of a sufficient local market, of a federal concern, of an endogenous capitalist tradition, of an export mentality, etc., are repeatedly mentioned as being the old rule. The tales and myths have to do with the way things were in the days of the Quiet Revolution, or even before. The organizational culture may be poor, but the political one is not. Until now, it

seemed to have had the upper hand on organizational cultures which have had little chance to coalesce. Clearly, this has been a situation of the political culture being integrated in the organizational culture and taking it over from within, with the growth of a French entrepreneurial class and the "virage économique" taken by the Quebec government and elites. The situation has already began to reverse itself.

As we already mentioned, considerable energies and imagination has been invested to establish a definite list of all those reasons, real and imaginary, behind the creation of SOEs (Monnier, 1977; Gillis, 1980; LePors, 1977). What is usually left untouched is the impact of these different actes de naissance on the organizations themselves. Philippe Faucher (1981) has summarized these reasons under ten headings:

1) The general interest as best defined by the State
2) The existence of a natural monopoly
3) A reluctant private sector
4) The necessity to save traditional industrial sectors
5) To maintain a strong national presence in some sectors
6) The need to preserve national sovereignty
7) The expressed preference of financial institutions
8) To bypass cumbersome administrative rules

9) As the natural outgrowth of other nationalized industries

10) As the result of large-scale social and political upheavals.

In the case of Quebec, most of these reasons have played relatively minor roles. For example, the expressed demands of financial institutions for the active (and reassuring) presence of state enterprises have not been a factor. Quite the contrary. Certain sociopolitical considerations have been more crucial, notably the relative weakness of locally controlled enterprises and the almost total absence of a Québécois managerial and entrepreneurial class.

The temptation is strong to see an overall plan behind the creation of SOQUIP, SOQUEM, SOQUIA, SGF... The fact that most of them were created since 1960 only increases this certainty. But a careful examination of the circumstances presiding over their individual birth provides a different picture. When Sidbec, Hydro-Québec, the Société générale de financement and Soquem were established in the middle 1960s, there was simply no industrial policy. In 1971, the establishment of the Société de développement industriel can be seen more as the immediate result of an electoral change than as the administrative arm of any industrial policy. In fact the SDI was, and maybe still is, THE industrial policy!

In the cultural sector, the other privileged area for SOEs, it is difficult to argue that the creation of Radio-Québec in 1968 followed any cultural policy. As for the Régie de la Place des Arts or the Régie du Grand Théâtre, their establishment has more to do with the need to administer effectively what appeared to be "white elephants" than with any cultural policy.

In short, there was and still is no plan behind the creation and the utilization of SOEs as instruments of economic development. Paradoxically, the multiplication of ad hoc reasons which explain the emergence of each SOE can only make sense within the more global ideological context of the period. One should speak of a context rather than ideologies per se. In the social and economic sector, it is indeed difficult to find major policy differences between the five administrations which have ruled Quebec since 1960.

This context called for an increase in the capacities of collective self-definition and intervention of Quebec society. Often this tendency to self-affirmation is confused with an almost magical discovery of the role of the state by Québécois or with a drive for more political independence and economic development. This confusion is part of the mythology of the Quiet Revolution which generally presents pre-1960 Quebec as a backward, traditional and anti-state society kept under tight political rule by Maurice Duplessis.

From the start, state-owned enterprises were an integral part of the Quiet Revolution. They cannot be fully understood outside this context. Of course this is true of any set of SOEs. Their modes of creation and existence makes them more permeable to societal values and changes.

No public debate and certainly no strategic thinking presided over the creation of Quebec SOEs (this is already less true in 1979 with the creation of the Société nationale de l'amiante). They were established very often because they could be established and because they fitted in the economic discourse associated with the Quiet Revolution.

In one of the few studies, from a political economy viewpoint, of Quebec SOEs, Fournier (1979) lists the "global" economic objectives of Quebec since 1960. They include: job creation, francisation, francophonization, modernization, research and development, concertation, exportation, and capitalization. At one time or another, the list has included every conceivable objectives and policy. State-owned enterprises could always fit within a subset of these objectives.

This unique situation has been made the more unique by the large margin of action possessed by the provincial state to straighten the situation. The creation of state enterprises in Quebec has been done with such facility that it has not always been possible

to keep track of the enterprises thus created. The division of responsibilities in a federal regime and the benign neglect of the central government towards the economic development of Quebec have also facilitated the task. Between 1960 and 1980, the establishment of a new SOE was greeted if not by enthusiasm at least by no serious opposition by the Quebec private sector since, in most cases, it was either a SOE or nothing at all. During those years, the crucial variable in the assessment of the performance of such enterprises was not so much that they were state-owned than that they were Quebec-controlled.

This particularly favorable milieu had important consequences for the operations of the Quebec SOEs and a direct impact on the visions of their managers. Managerial discretion, defined as the ability of managers to implement strategies different from those of the owners (Aharoni, 1981), already high in SOE, has been even higher in the Quebec case. In most cases, "battles" against organized private or foreign interests were not necessary.[23] SOEs appear almost instantly through administrative fiats. The first generation of managers believed and acted as they owe nothing to their political genitors. Close contacts, personal or political, have not characterized the first months of the government relationships.

The fact that the creation of those SOEs was principally a response to an ethnic division of labour, also accelerated the

tendency of such enterprises to acquire a sufficient large area of manoeuvering. Their simple existence was automatically considered as a proof that the raison-d'être behind the creation of the enterprise has been met. In this sense, the creation of these enterprises can be regarded as an attempt to counteract the forces of the ethnic marketplace. Their success was a real one.

Although today there are numerous cries for the privatization of SOEs, one is surprised at the low level of "animosity" against these provincial SOEs. From 1973 to 1983, the government actively looked for a candidate for privatization so as to change its image as a statist and bureaucratic government. None could be found which would justify such a move. Since then, the decision seems to have been taken to partially privatize the Société des alcools under a plan which would transform certain stores in workers cooperatives. The plan has been ferociously opposed by both unions and business and will apparently be limited to a selected number of experiments.

Not only do SOEs benefit from their insertion in the Quiet Revolution context, they have often succeeded in providing a new impetus to a stagnant ideological environment. For example, SOEs have become vocal proponents of decentralization and regional economic development. In numerous instances, they have become an important regional actor linking up with other regional actors to

ask for more deconcentration and decentralization. Radio-Québec and Rexfor are the best examples of this new phenomenon.

From this description, one could get the impression that Quebec SOEs are immuned to change, comfortable and safe as they are in their ideological niche. They are not. They are likely to fall victims, maybe not innocent but easy ones, to the ideological renouveau which is blowing across Quebec. Their fall could be as rapid as their rise since, except for their bureaucratic structures, they have little to hold them together from within (the mere size of Hydro-Québec is the best insurance). Although most of them have gone through the gestures of establishing and obtaining government approval for their "development plan," there is no resemblance between this ritualistic exercise and strategic planning. For most of them, diversification is not an option. Thus planning remains a cumbersome exercise whose futility could be rapidly exposed when and if the "going gets rough." For the last 20 years, Quebec SOEs have lived in the cocoon of the Quiet Revolution. They still benefit from the ideological capital accumulated then. They live by the illusion that they are untouchable and that the public will rally to their help if needed (Bill S-31). Their wake-up call might come too late.

If and when privatization comes, what it could find are structural skeletons with little cultural flesh of their own.

Table 1

MAJOR INDUSTRIAL SOEs IN QUEBEC

name	rank (1)	employees	assets (2)	revenues
Hydro-Québec	1	18 975	25 192	3 593
Groupe SGF	6	9 500	1 000	850
Sidbec-Dosco	20	3 476	630	93
Société des alcools	25	2 576	176	787
Rexfor	54	1 358	107	50
Raffinerie de sucre du Québec	266	200	81	40

By now, the preliminary nature of these findings as well as their speculative nature should have become evident (17). Our pretention to take into account a number of SOEs presumes that this organizational culture is a collective enterprise and that certain traits are to be found in all Québec SOEs. Although not entirely unjustified, this assumption should not obscure the fact that the idiosyncracies of each organizational cultures are undoubtedly more relevant to the understanding of each SOE.

Also to be mentioned is the fact that the immediate political environment of these SOEs is that of Québec. Should we say more! The extreme politicization of this environment, the interventionist nature of all Québec governments since 1960, the sudden political turnovers all of this defines a very turbulent

Source: Les Affaires, cahier spécial, 16 juin 1984

1. number of employees

2. in millions of $

Notes

1 In fact, the field is still so much open that one rarely encounters the traditional indictments of past research. Good will is the order of the day (Langford, 1982; Tupper, 1979).

2 As in any burgeoning new field, typologies and definitions abound, thus confirming that "to name" and "to classify" are still the first steps of any scientific enterprise. A ritual found in almost any article and paper on SOEs is an elaborate typology of the reasons for the creation of state enterprises. The search for one's roots is indeed a universal phenomenon!

3 Through an inexcusable oversight, the federal-provincial dimension of Canadian SOEs has been neglected. In Canada! Incroyable! M. Chandler (1983) briefly mentions the "province-building" dimension of SOEs and Vining and Botterell (1983), in their in-depth study of provincial state-owned enterprises, give this dimension no explanatory power. With the controversy surrounding Bill S-31, things will certainly pick up.

4 Academics, like politicians, find a masochist pleasure in defining a problem in such a way as to make the solution an impossible dram (inflation vs unemployment, gun vs butter, equality vs justice). What a better way to preserve it intact for future generations. Enfin, passons....

5 This typology is adapted from Langford (1983).

6 Of all these, Crozer comes closest to a cultural vision of bureaucratic organizations. But his is a different vision. The "culture" on which he focuses is that of France which he hypothesizes permeates any organization operating in that country. The French cultural traits of lack of communication across social strata, individual isolation, avoidance of face-to-face relationships -- all of which he takes for granted -- are seen as the implacable mold for the French organizational way of doing things. Ezra Suleiman (1974) has criticized this approach for ignoring the peculiar characteristics of those organizations under study (the tobacco state enterprise: the vast majority of the personnel is made up of women and the higher management echelons were included).

7 Mazzolini's (1979) study of foreign investments decisions by European SOEs should also be mentioned, if only for the interesting attempt to apply Allison's (1970) three models of decision-making. In France, Anastassopoulos (1980) and Berthomieu (1970) have concerned themselves with the management of public enterprises, but their real concern is state-SOEs relationships. So is the vast literature which examines the <u>bien-fondé</u> of the numerous nationalizations.

8 The Canadian case studies included Air Canada (freight service to Venezuela, wide-body aircraft), CN (traffic control system, recapitalization), and Petro-Canada (Frontier exploration, acquisition of Philipps Petroleum, Artic Pilot Project).

9 Petro-Canada was considered to be in the growth phase, the CN in the maturity phase, and Air Canada in the declining one.

10 Hafsi does ask the managers in his sample to list the qualities of a good state manager. The list of qualities is revealing (consensus builder, ideal driven, risk taker, concerned with fairness, etc.) but no use is made of it.

11 Empirical evidence for these propositions is at best inconclusive, indicating that the conceptualization, and not only the testing, of these various hypotheses is seriously faulted. Three areas have been extensively examined (and cross-examined): utilities, transportation (air and train), and municipal services (fire protection, garbage collection). The literature is extensively reviewed in Borcherding (1983, p.p. 126-36). For people most concerned with externalities and correct pricing, no one pays any attention to such fallouts as corruption, political banditry and crime which often accompany the privatization of some services (garbage collection).

12 Here again the empirical evidence, as reviewed by Borcherding (1983), is not conclusive. For example, it has been argued alternatively that public managers will tend to favor capital investments so as to limit their labour problems and insure that future of the organization, and that their aversion to risk and their willingness to get the support of unions will make them more labour-intensive.

13 In some comparative studies of public and private firms, some hypotheses as to the more effective management of some SOE can be found (Baldwin, 1975; Denning, 1982; Caves and Christensen, 1980). Among them: public managers in provincially controlled enterprises will tend to be more efficiency-oriented since their performance can be more easily monitored, a competitive environment will increase the commitment of public managers, a concern for economies of scale will be more prevalent in those enterprises which transcend administrative jurisdictions will manage.

14 No attempt will be made to review this vast literature. Extensive bibliographies can be found in Alain (1981), Borcherding (1983) and Hafsi (1981). Critical assessments of this new Canadian growth industry are to be found in Tupper and Doern (1981) and Langford (1982).

15 No attempt either is made to review the "accountability" literature which no doubt was instrumental in the establishment

of the Lambert Commission and which in turn has profited a great deal from the Commission and the inability (or unwillingness) of the federal government to follow through. In this case, the (academic) push- (political) pull effect is too evident not to be mentioned.

16 This summary is taken from the author's study of the organizational culture of a political office, the Bureau du premier ministre du Québec, (Latouche, 1983).

17 These interviews (14 in all) were unstructured and somewhat informal. No attempt was made to construct a representative sample although the SOEs selected were all actively involved in a competitive market. The criticism of an "impressionistic" approach is thus clearly legitimate.

18 As will soon become obvious, a more in-depth study would require going over the political events, structural changes and ideological confrontations which came to characterize Quebec society since 1960. The number of studies on this period is impressive and the only thing yet to be written (the last spike?) is a Pierre-Berton-type saga. We will assume the readers to be familiar with this literature and this context.

19 The case of the Régie des installations olympiques is quite revealing. It was created in a crisis situation, after it had become apparent that the olympic installations could not be ready in time for the big day. They were, and the enterprise still lives off this costly accomplishment. But since then, it has not been able to decide if the stadium should receive a permanent roof.

20 Eric Kierans did quit the board of the Caisse de dépôts et placements two weeks before the 1980 referendum, alledging governmental interference in the investment policies of the Caisse. He has since readily admitted that his gesture, especially its timing, was motivated by political considerations personal communication.

21 The case of Hydro-Québec and its various development plans has been a strange one. Between 1977 and 1980, the Department of Energy strongly objected to the optimistic projections of Hydro-Québec regarding future electricity consumption. After a new forecasting exercise finally lowered these projections and the investments program was consequently curtailed, the government reversed its position and pressured, without success, Hydro-Québec in accelerating its program. This forecasting va-et-vient has perhaps more to do with political considerations (the return of Robert Bourassa, the naming of a new president, a change of attitude towards foreign sales) than with SOE-government relations.

22 Although some resistance, more bureaucratic than political, was expressed by various SOEs when the Quebec government attempted to enlist them in its 1983 Plan de relevance économique.

23 The much-heralded case of the hydro-electric nationalization of 1962 was in fact no nationalization at all but a mutually acquiesced sale. The bargaining was tough although in the end the private companies came out well-satisfied. The raising of the necessary capital on U.S. financial markets was achieved with a degree of facility which surprised event the most virulent opponents, especially at a time when the Cuban expropriations were still fresh in the news. General Dynamics proved a more difficult case in the asbestos "nationalization" of 1979. In this case, the strategy adopted by the local management of the targeted firm was the main reason behind the turmoil. In a very effective move, this management decided to enlist directly the political support of Senator Charles Percy to put its case against this "Cuban-style" attack on an American company.

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EXHAUSTIBLE RESOURCES AND PUBLIC FIRMS IN CANADA

by

Robert D. Cairns
Department of Economics
and
Centre for the Study of Regulated Industries
McGill University

RÉSUMÉ

Il n'existe que très peu d'entreprises publiques fédérales dans le secteur des ressources non renouvelables. En fait, seules Eldorado Nucléaire, la Société de développement du Cap Breton et Petro-Canada entrent dans cette catégorie, et peut-être aussi Texasgulf, qui est rattachée à la Corporation de développement du Canada. D'autre part, les entreprises provinciales, dans les industries minière, pétrolière et gazière, sont un peu plus nombreuses. Vining et Botterell (1983, p. 359) en présentent un total de quinze. Mais, comme le disent les deux auteurs et comme le montre leur tableau, la très grande majorité d'entre elles ont été établies au cours des quinze dernières années.

Une des meilleures façons d'étudier les entreprises publiques, du point de vue économique, est de les comparer à des compagnies privées sous l'angle de la rentabilité ou d'autres aspects quantifiables de leur performance. Malheureusement, ces entreprises n'offrent qu'un assez petit et court échantillon pour de telles comparaisons, au cours d'une période d'instabilité sur les marchés des ressources naturelles. Il ne faut pas oublier non plus que les entreprises publiques doivent souvent remplir, sur le plan social, d'autres obligations que celles de faire des profits, et que l'effet de ces obligations sur leur performance présente encore des difficultés théoriques. Pour ces raisons, et parce que notre compréhension de l'incidence théorique de l'entreprise

publique est encore rudimentaire, la meilleure contribution que puisse faire ce document nous a semblé se situer sur les plans conceptuel et non empirique.

Une importante question théorique qui s'est posée sur le plan des politiques au cours des années 70 a été l'effet, sur la performance des industries, des rentes provenant des ressources. D'autre part, le rôle des industries d'exploitation des ressources et leur contribution financière ont toujours été d'une grande importance au Canada. Au temps de la Confédération, on s'attendait que les ressources naturelles soient la pierre angulaire du financement des provinces. Et il existe effectivement au Canada un avantage constitutionnel considérable à établir des entreprises publiques, particulièrement dans l'industrie minérale. En effet, le gouvernement fédéral ne perçoit pas d'impôt sur le revenu des entreprises publiques de niveau provincial. Un autre facteur qui a peut-être favorisé la création de ces entreprises est le rôle très important joué par les compagnies qui exploitent les ressources dans certaines régions du pays. Les économistes demandent habituellement : " Pourquoi y a-t-il des entreprises publiques dans telle ou telle industrie "? Or, ce n'est pas cette question mais deux autres, laissées ici sans réponse, qui ont hanté l'auteur au cours de ses travaux : Pourquoi y a-t-il au Canada si peu d'entreprises publiques exploitant les ressources ? Pourquoi ont-elles été créées si tard ?

ABSTRACT

There are very few federal Crown corporations in the exhaustible resource industries. In fact, only Eldorado Nuclear, Cape Breton Development Corporation (Devco) and Petro-Canada fit the category, plus possibly Texasgulf as part of the Canada Development Corporation. There are a few more provincial Crown mineral and oil and gas corporations; Vining and Botterell (1983, p. 359) list a total of fifteen. But, as the two authors point out, and as is revealed in their table, by far the bulk of these have been established in the past fifteen years.

One of the obvious economic exercises in studying Crown corporations is to compare the profitability or other quantifiable measures of performance of Crown firms to private firms in the same industry. Unfortunately, these firms provide only a small and short sample for performing such comparisons, over a period of instability in natural resource markets. One must also be aware of the fact that Crown firms are often charged with other social, obligations than profits, and that the effect of these obligations on performance still presents a theoretical quandary. For these reasons, and because our understanding of the theoretical implications of the public firm is still rudimentary, the best contribution of this paper seemed to be non-empirical and conceptual.

An important theoretical and policy issue of the 1970s was the effect of the existence of resource rents on industry performance. But the role of and fiscal contribution of the resource industries has long been an important question in Canada. At the time of Confederation, natural resources were expected to provide the "cornerstone of provincial finance." Indeed, we find in Canada a considerable constitutional advantage to the establishment of Crown corporations, especially in the minerals sector: federal income tax is not levied on provincial Crown firms. Another factor which may have encouraged the establishment of Crown firms is the very important role of resource firms in particular regions of the country. Rather than the usual question asked by economists of "Why do Crown corporations exist in this industry?," the two other questions, which here will be left unanswered, haunted the work on this paper: Why does Canada have so few Crown resource firms? Why have they been established so late?

1. INTRODUCTION

There are very few federal Crown corporations in the exhaustible resource industries. In fact, only Eldorado Nuclear, Cape Breton Development Corporation (Devco) and Petro-Canada fit the category, plus possibly Texasgulf as part of the Canada Development Corporation. There are a few more provincial Crown mineral and oil and gas corporations; Vining and Botterell (1983, p. 359) list a total of fifteen. But, as the two authors point out, and as is revealed in their table, by far the bulk of these have been established in the past fifteen years.

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2. RENT COLLECTION

One of the central economic issues in discussions of the role of the Crown corporation is the extent to which profitability -- taken to be the motivating goal of the private firm -- is traded off against other goals. The two goals most frequently treated are non-pecuniary rewards to management (inefficiencies), which are viewed as being a result of differing incentive structures in public and private firms, and social goals (i.e., non-economic goals) mandated by the government to which the public firm is ultimately responsible.

In a resource-producing country, another consideration arises. Resource rent, the intrinsic value of the natural resources produced, and the use to which it is put, involves important questions of social equity and economic efficiency. The importance of natural resource rents to the Canadian economy, even before the energy crisis of the early 1970s, led Kierans (1973) to recommend the Crown corporation as an instrument of rent appropriation. Since 1973, others, such as Cohen and Krashinsky (1976), have made similar recommendations.

Let us suppose that the main objective of a Crown exhaustible resource firm is to collect (i.e., maximize) rents. Then, just as in the case of a private firm, any "social" (interpreted in a very broad sense) objectives mandated by government will conflict with

the main objective. One could argue, then, that if the basic purpose of the Crown firm is to collect rents, it should not also be mandated to perform onerous social objectives such as those expected of other Crown corporations. Otherwise, contradictions would arise similar to those which a private firm would face if expected to perform the same functions.

If this argument be accepted as a point of departure, then the rent-collecting Crown corporation becomes an interesting form, for our behavioural hypothesis makes the corporation into a quasi-private firm. One hastens to add that this does not negate the usefulness of the instrument: exhaustible resources in Canada are all of (1) part of the national patrimony, (2) depletable and exhaustible, and (3) substantially foreign-controlled. Any of these, taken by itself, would be adequate cause for some to argue for rent appropriation, possibly by a public firm. But the quasi-private (i.e., profit maximizing) nature of the hypothesized rent collector allows a more direct comparison of the incentives and relative efficiencies of private and public corporations, without the necessity of considering the efficiency of trade-offs between profits and social objectives.[1] In this way, a Gedankenexperiment treating the different incentives facing managements of the two types of firm provides a further insight into the performance characteristics of the public firm.

This would seem to be a useful exercise. The lead in describing the economics of the Crown corporation has been taken by so-called "positive" economists analysing the implications of different systems of property rights. Unfortunately, if recent work by Borcherding (1983) is indicative, the results of the efforts of the positive economists are inconclusive. For purposes of the present, somewhat confined, discussion, one finding in Borcherding's paper seems to be that theory and empirical work suggest that the quasi-private firm both should and should not be equally efficient to the private firm.

The question to be treated in this section of the paper is, then, that of the relative efficiency of the Crown corporation as a rent collector. This has two aspects. First, one must discuss the economic efficiency of the public firm as a market actor, in terms of such concerns from the industrial organization literature as managerial incentives, X-inefficiency, innovativeness, etc.. Second, one must treat the effectiveness of the Crown corporation as an instrument of rent collection itself. Much of this involves comparison of the efficiency of the public firm to various forms of taxation, royalties, or licensing arrangements.

Discussion of the first aspect, the economic efficiency of the public firm, is usually based on ideas contained in an article by Alchian and Demsetz (1972). According to them, the reason for the existence of the classical (entrepreneurial) firm is economies of

team production: the productivity of members of the team (factors used by the firm) are super-additive. A problem arises, however, insofar as the direct contribution of individual members of the team is not easily measured, so that the possibility of "shirking" in one's work is always present. The problem is solved operationally by allowing the entrepreneur (whom they call the "monitor") to appropriate the residual returns. This property right to the residuum gives the monitor the incentive to limit (but not entirely eliminate) shirking.

Thus is the theory of the firm integrated into a theory of property rights. It is to be noted that the theory holds that an attenuation of property rights in any way (such as by taxation or regulation) reduced the reward to that right and hence reduces the activity involved in producing income from the right. For example, taxation of the residual return would reduce the reward to monitoring of shirking, and hence reduce monitoring activity by the entrepreneur. The key feature, then, is the ownership of rights to residual claims, although efficiency is also served by the non-existence of artificial barriers to competition.

When one turns to analyse the corporation, however, the argument concerning monitoring and ownership claims becomes thinner. In the modern corporation, it is the shareholders who are the residual claimants. Unlike the classical entrepreneur, the shareholder does not have full time to devote to monitoring the

performance of an individual company in which he holds shares. Incentives are further blunted by the optimal portfolio choice, which spreads the risk of poor performance of any one company among a wide variety of holdings. Even if the shareholder is so well placed as to hold, say, 10 per cent of any one corporation, monitoring incentives are attenuated by the equivalent of a 90 per cent income tax on the results of his efforts. Furthermore, many stocks are held by financial institutions such as pension funds, insurance companies, etc., with the residual claimants, pension fund contributors, pensioners, insureds or annuitants, being even further removed from the monitoring process. The residual claim holder has an incentive to do no more than satisfice, relying on easily measured rules of thumb[2] such as short-term profitability or share price movements. Limited liability is a clear institutional expression of shareholders' monitoring difficulties.

This thinness in the argument is recognized by Borcherding (1983, p. 127), who responds by noting an "abundance of instruments" to bring management's interests into line with those of the shareholders. Takeovers, mergers, profit sharing, stock options, appreciation rights and managerial reputation are all mentioned. The "problem of the tax" remains, however. If a manager holds even as much as 5 per cent of the shares of a corporation or of the rights to the profits of a corporation, his monitoring incentives are <u>still</u> blunted by at least as much as a

95 per cent income tax on the fruits of his efforts.[3] By the same token, for a bloc of shareholders who own, say, one-third of outstanding shares and wish to oust the existing, presumed inefficient management, the effective tax rate on the capital gain from establishing new management is two-thirds. In addition to that, the ownerhsip claim to the capital gain is not complete: the gain cannot be realized immediately, or even at one time, without depressing share prices. Such instruments as these may be relied upon to eliminate only gross inefficiencies. We are left with the managers' reputations.

The question remains, however, in turning to consider the Crown corporation, whether any instrument at all exists for monitoring. There does exist frequent concern in the public administration literature about lack of "accountability" of many Crown corporations to Parliament. In summarizing research on public firms in several countries, Gélinas (1978, p. 23) observes that the public tends to evaluate performance on the basis of the balance sheet, a practice one might add, not dissimilar to that of shareholders of private corporations. Also, there are significant political incentives -- often acted upon -- for opposition parties to monitor Crown corporation performance and to draw attention to inadequacies, at fairly low cost.[4] The role of opposition parties is conspicuously absent in many "economic" treatments of the public firm.

The monitoring incentives of managers of the Crown corporation, too, are less well understood. Even in an era which coined the term "privatization," there is no direct market for corporate control affecting the decisions of public enterprise managers. Yet Pratt (1982, p. 93) has drawn attention to an analogous incentive: a strong profit position may be one means of ensuring a degree of corporate autonomy from the political process, just as, for a private corporation, it may ensure autonomy from the market for control. Public administration scholars, again, are very concerned about the appropriate degree of independence of Crown corporations from the political process, because of these same internal incentives towards autonomy. For the moment, however, we are focusing on the "bottom line" efficiency of management. There would appear to be strong forces at work encouraging an eye toward profitability in the public firm. As to the incentives provided by management reputation, there is no reason to suppose they have any more or less force in a private as compared to a public enterprise. In fact, if the manager of the public firm is mindful of the potential for future employment prospects in private firms, he will be led to emphasize profitability or "turning around" the company. (Compare Borins, 1983, p. 455.) This is especially true if much of a manager's human capital is industry-specific.

A further point raised by some writers about the difference between public and private enterprise is the so-called "bottomless

pocket" of government support on which public corporation managers can draw in the event of losses. It is true that a government would be reluctant to allow an important Crown corporation to fail, but it is also true that a firm government would be reluctant to allow an equally important private firm to fail. One is reminded of a number of bail-outs of private sector firms in recent years -- even at least one foreign-owned firm. A government can no more allow a large firm in the private sector, such as Inco, Cominco, or Hudson Bay Mining & Smelting, to fail than Petro-Canada or Texasgulf. Large firms in the private sector become de facto chosen instruments of policy, for employment or other reasons. They cannot be abandoned. This, indeed, is the reason for the creation of the Cape Breton Development Corporation (see Tupper, 1978). Private firms can even rely on such government support; one need only compare the laxness of sulphur dioxide emission control at Inco and Ontario Hydro, which affects both firms similarly. Both firms overextended themselves in the 1970s in an incautious way that would spell takeover or other strong medicine for competitive firms without rents to draw upon. Government protects both from the internalization of social costs.

The final general issue relating to the relative efficiency of a private firm and a hypothetical public firm stripped of social responsibility relates to risk-taking and entrepreneurship. This, too, is of direct relevance to the exhaustible resource

industries: if exploration forms an important part of their activities, they may be largely entrepreneurial, requiring important inputs of timing and judgment. The prediction of the theory of property rights (see, for example, Borcherding, 1983, p. 129) is that riskier investments and innovative activities will be shunned by publicly employed managers. Some evidence is cited in support of this prediction.

This prediction, of course, runs counter to the perspective of the Crown corporation held by C.D. Howe. He was of the opinion that the Crown corporation was a worthwhile instrument of government policy only to pioneer in fields where the private sector was timid or lacked risk capital. Apparently, according to the property rights theory, a man renowned for his rational and astute approach to politics was completely out of his league when it came to the use of the instrument for which he was most famous. The prediction also runs counter to an observation in The Economist (1978, p. 37): "In the most highly successful postwar economies (Japan, South Korea) governments have turned entrepreneur to start up new industries or to restructure old ones."

Indeed, other contrary evidence exists as well, some relating directly to exhaustible resources. In a paper discussing the merits of a proposed American public oil company, Pindyck (1976) compared the exploration success ratio of the national oil

companies of six countries to that of private firms exploring in the same regions as those companies, over the period 1968-73. Although the comparison was not ideal, so that firm conclusions could not be drawn, there was no reason to suppose that any of the public firms performed less well than private firms in high-risk ventures. His conclusion was that a public oil firm exploring for oil and gas might be desirable, but he also adduced arguments to the effect that it would not be useful to establish a company to perform the more managerial function of negotiating crude oil imports into the United States. Indeed, Leland (1978, pp. 414-15) has made a similar prediction to Borcherding's, but for private firms involved in exhaustible resource exploitation: he suggests that (private) managers' undiversified human capital can lead to excessively risk averse behaviour when there is a separation of corporate ownership and control.

Pratt (1982), too, has argued that a state company can better afford to invest in high-risk projects. We do observe in Canada investments in highly risky technology at Atomic Energy of Canada, Ltd., in high-risk exploration by Petro-Canada, and in commercially risky technology in the tar sands, all of which have generated public concern. If any credence is to be given to the "bottomless pocket" argument, it may in fact be with respect to a penchant for over-investment in high-risk entrepreneurial activities by Crown corporations. But this must, on the other hand, be tempered by the observation of other costly programs

aimed at private firms: tax holidays, accelerated write-offs, depletion allowances, P.I.P. grants, etc.. Over-investment may be what is desired by the government itself, rather than the managers of the Crown corporation.

When one comes to treat the efficiency of the public firm in terms of garnering resource rents, rather than simply profitability, one runs into an obvious theoretical problem with the Alchian/Demsetz view of the firm -- even the classical firm. In the resource firm, there are two types of residuum: (1) the rent to entrepreneurship, as discussed by Alchian and Demsetz and (2) the rent to resources, including both the Ricardian rent, which Ricardo himself treated as what was left after the other factors were paid, and the long-run scarcity value. The resource is not, then, a factor like other members of the team which are all personified. (The entrepreneur is also the owner of capital, which thereby plays no role in the theory.) The double-residuum problem may be one reason for the ferocity of the battle over resource rents in Canada and other countries in the 1970s.

The best Alchian and Demsetz (1972, p. 786, n. 12) can do with the non-personified factor is to treat it as if there were a partnership between the entrepreneur and the resource owner, in which there is a form of gross output sharing. Gross output sharing is, of course, the traditional form of royalty, used not for its precision as an instrument of rent division but, in the

terms of Alchian and Demsetz, its ease of monitoring. As government resource owners have become more sophisticated in the use of policy instruments, however, much thought has been given to the trade-off between monitoring ease and precision. The problem remains, however, that obtaining the resource rent impinges on the entrepreneurial rent -- both through effects on managerial incentives to "X-efficiency" and through effects on sequencing, timing and cut-off grades, effects which may become severe if the level of rent capture is high. This, indeed, is the main argument for the establishment of Crown firms to gain mineral rents.

Another form of inefficiency, arising from the very existence of the second of the two residua, the resource rent, may be more controversial. The "Dome effect" of overextension into too many risky projects, using heavy debt loads, has usually been blamed on federal government incentive programs for exploration in the Canada Lands. An equally potent source of problems may, however, be the expectation of huge but incompletely appropriate resource rents to be left in the hands of the resource firm by the resource owner. These expected rents <u>also</u> provide, in part, a source of internally generated funds (perceived to cost less to the firm than the market rate), and in part an expected revenue source used to secure external debt, both of which may be used to seek an increasing share of undiscovered but open-access resources. A similar effect has been used as the basis for ill-advised expansions of the firm. This would seem to be an argument for

siphoning off the bulk of resource rents, though, in view of comments above about penchants for risky investment, not necessarily by a Crown corporation.

It might be argued, however, that most firms do not have expectations of the size of rents expected at one time by Dome Petroleum or Inco. Resource rents exist, which are imperfectly captured by various instruments in place. According to theory, private mining firms should be well managed because of the incentives of the marketplace. Yet, in a short article put out by the Centre for Resource Studies, Richardson (1984) reports that there are severe weaknesses of management in the Canadian mining industry, including poor planning, poor marketing, a weak innovative effort, failure to generate good employee relations, and inadequate government relations. Surely the reason for this cannot be barriers in the market for corporate control (e.g., FIRA). The reason is more likely that resource rents have played some role in corporate profitability and in the past have been sufficient to raise returns above the simple benchmarks used by shareholders and investment fund managers. But, as resource prices and hence rents have been depressed for the past several years, they have not made their customary contribution to profitability. Weak management, always present, has only recently been exposed.

Thus, resource rents are important factors, possibly affecting the performance of certain sectors of the economy, and certainly affecting distribution. If the government chooses to appropriate resource rents, it must choose one or more instruments for effecting the appropriation. Auctioning mineral rights, as suggested by property rights theorists, can be successful only if the auction is competitive. Many, however, have strong doubts that the oil industry, for example, is competitive. In any case, by exacting a high up-front charge for mineral rights, the auction tends towards concentration of the industry by increasing the risk to the investor. Royalty or tax schemes will obtain only a fraction of the rents. In addition, as observed by The Economist (1978, p. 37), there is widespread suspicion that the private sector is clever at concealing profits and that the tax system is not flexible enough to capture a large share of rent. From a property rights point of view, rent taxation will attenuate property rights and thereby lead to certain inefficiencies -- which will increase markedly as the tax rate increases.

Another instrument is the public firm. One must, however, ask how the public firm is to be established. If it obtains its mineral assets by expropriating private firms, then, as Shaffner (1976) points out, severe early losses may occur when the expropriated firm refuses to cooperate. Purchase in the open market will lead to the capitalization of rents, as was observed in the takeover of Petro-Fina by Petro-Canada.[5] If the public

firm is started from scratch, there may be a long gestation period before profits are observed, and that may be seen as a disadvantage by a government strongly monitored by opposition parties.

This would seem to set up a classic "calculus of instrument choice" problem, in the sense of Trebilcock and Prichard (1983). Yet, as Tupper (1978) observes, there has been a definite preference for the private sector over the public sector on the part of most Canadian governments. This is at least partially borne out by a table provided by The Economist (1978, p. 39), reproduced in Borcherding (1983), which shows a substantial dependence on the private sector in Canada as compared to several other countries. Examples of this performance, by which private enterprise is tried first and then, if it fails, the Crown corporation is turned to as a last resort, are the series of subsidies to Cape Breton coal mining before the establishment of Devco (Tupper, 1978) and the attempt by the Saskatchewan government to obtain potash rents through taxation before partially nationalizing the industry. (See also Tupper and Doern, 1982.) The only cases which Tupper and Doern (1981) turn up in which the Crown corporation was used as a first resort are Air Canada and Atomic Energy of Canada. But even for the latter, the marketing of the Candu reactor was only put in public hands after the failure of a private firm to do the job.

Indeed, the approach to rent collection based on a calculus of instrument choice raises immediately in one's mind two questions: Why are there not more such Crown resource corporations? Why were they not established sooner? Scott (1976) has found that, historically, natural resource revenues have been important in provincial government finance. In fact, Innis (1938) argued that the tariff itself was a clumsy, indirect method of appropriating natural resource rents. Nelles (1974) recounts how, just after the turn of the century, there was widespread support for the establishment of a Crown silver mining firm to be run by the Ontario government for the purpose of obtaining the rents for the public. There have been frequent and loud outcries favouring the nationalization of Inco, historically a large rent producer. (See Cairns, 1982.) There was the example of a successful Crown firm in Ontario Hydro. Why was the instrument not tried? Trebilcock and Prichard (1983, p. 48) note that an important factor in nationalizations of private hydro firms in Quebec and British Columbia in the early 1960s was the tax avoidance feature of Section 125 of the Constitution Act, by which provincial Crown corporations are not subject to federal income tax. But, in the face of this constitutional impetus, and the example of Ontario Hydro, why were these provincial hydro industries nationalized so late? Why has the taxation incentive not had any appreciable effect beyond the electricity industry, especially in other resource industries? Natural resources were, after all, intended

by the Fathers of Confederation to be the "cornerstone of provincial finance."

In summary, the main economic analyses of the public firm are not entirely helpful in understanding the role of the Crown corporation in Canadian resource industries. The analysis of market efficiency, based on property rights theory, does not reveal striking differences that should be predicted between the public and private firm. Nor is the approach based upon the calculus of instrument of first resort, as this approach would predict would happen in certain cases, but has often been used as a last resort after other instruments have been tried and found to have failed, an iterative process that strains the credibility of the supposed calculus.

Rather, our analysis of the means of setting up a Crown corporation in mineral industries suggests that the instrument is not a route to efficient rent collection particularly, unless the government is prepared to be an entrepreneur in the industry. The evidence does not contradict the idea that the government can be a successful entrepreneur in these industries. But, in anticipation of the discussion to take place in the next section, if the government is to be an entrepreneur in an industry, it may prefer not to limit its attention to the mere collection of rents. Starting a firm from scratch is, in any case, not of much help in the appropriation of rents presently being realized by private

firms. As this was the focus of the rent discussions of the 1970s rather than, say, expected future rents to non-conventional or offshore sources, we drop rent collection as an important rationale for the establishment of a Crown exhaustible resource firm. As discussed below, this would seem to be consistent with observations of the functions of both federal and provincial resource firms.

3. OTHER FUNCTIONS

We have spent much time on a discussion of whether the Crown corporation is an appropriate collector of natural resource rents. The reason for this has been that this would be a standard economic justification for the public firm. If, in the tradition of Coase (1937) and of Alchian and Demsetz (1972), the private firm is a means of superseding the market in order to reap economies of organization, then the government firm is only a step more on this continuum. The assumed goal of maximizing rents is the familiar one for the private firm. An unfamiliar actor, government, must be accepted as an entrepreneur in resource markets. But this eliminates the uncomfortable problem of the existence of two residuals in the same way that ownership of capital by the monitor does in the analysis of the classical firm.

Our conclusion from this long discussion has been that the Crown corporation has not been used as a device aimed primarily at rent collection. Indeed, the only way in which it appears particularly suited to rent collection is through a start-from-scratch operation, beginning with doing its own exploration. Government firms are not necessarily incompetent to do their own exploration. In fact, Petro-Canada and several provincial Crown corporations such as SOQUEM, SOQUIP, Saskatchewan Oil and Gas Corporation, Saskatchewan Mining Development Corporation, NOVACO, and Manitoba

Mineral Resources, Ltd., have mandates to explore for minerals, alone or jointly with other firms, and have had varying degrees of success. But, the incentives to government to become involved in the early stages of mineral production seem to be less gathering of potential rents than other goals. One recalls Shepherd's (1982, p. 20) dictum that "The very narrowness of private enterprises limits their suitability to certain market situations in which social elements are minor." The findings of this paper would appear to suggest that the dictum could be extended to include the goal of the private firm, namely, rent maximization.

The presence of other "social" goals has presented a quandary for economic theory, but in other studies of the public firm, recognition of it has been a necessary first step in an analysis of performance, especially one based on incentives. Here, we consider a different type of continuum, namely the types and purposes of government presence in the economy.

Schultz (1982) has argued that there has been a progression in the function and scope of regulation in Canada through the twentieth century. While noting that his compartments are not strictly defined but reflect only broad tendencies, he has perceived three categories of activity of regulatory agencies, namely, to police the actions of an industry, to promote the interests of members of an industry, and to plan the development of an industry in the context of the entire economy and society.

It would be surprising if the use of the Crown corporation did not exhibit a progression similar to that of regulation. In a very insightful paper, Chandler (1983) argues that there are three types of Crown corporations, which she calls facilitative, nationalistic and redistributive. The first two would appear to fit into Schultz's category of promotion, while the third, redistributive Crown corporations, given her analysis of them as asserting public control over the economy, would correspond to planning.

The policing function -- an economic function which in earlier studies of regulation was the main focus of attention -- is absent from Chandler's categories, however. Some economists have noted that one function of a Crown corporation may be to act as a "yardstick competitor" in an oligopolistic industry, perhaps even to go so far as to incur short-term losses to ensure that the industry produces at marginal cost in the long term. Petro-Canada does have a yardstick competitor as a part of its mandate, but certainly not as the major part. The policing function of a Crown corporation, a function which, it must be emphasized, accepts the legitimacy of the private enterprise economy but seeks to have it function more closely to the competitive ideal, has not been frequently used in Canada. This is in contrast to, for example, Australia, where yardstick competitors appear to be fairly common, largely because of constitutional limits to the scope of Crown corporations (see Corbett, 1965; Wiltshire, 1978).

Facilitative Crown corporations take a more active role in promoting the interests of the private sector, and are much more prevalent in Canada. For example, the Lambert Commission (1979) reports that one-half of the number of existing Crown corporations are involved in transportation or the provision of port and harbour facilities. This is a very common type of Crown corporation: Gélinas (1978, p. 15) observes that in practically all countries studied in the papers of his volume, the first industries to be nationalized were the major infrastructural industries, transportation and communications. Chandler (1983, p. 209) finds that facilitative corporations, which often provide a subsidy system to private firms, constitute no challenge to the private sector. Even public takeovers to save jobs, such as the establishment of Devco, are done in the context of the existing structure of the private sector, and are rarely opposed. (See also Tupper, 1978, on Devco.)

Nationalistic Crown corporations, according to Chandler, seek to promote the interests of internal private capital over those of external private capital, to a certain extent through rent redistribution. In this redistribution, the public-private distinction is not a critical issue. This view would be consistent with the view of Alberta state capitalism presented by Richards and Pratt (1979). Chandler (1983, p. 214) posits that the benefits of the nationalistic Crown corporations are not widely distributed.

The question of the social efficiency of nationalistic policies is a perplexing one. Nationalism, regionalism, continentalism and their variants can run counter to humanism. Yet nationalistic or patriotic sentiments are common feelings in all nations. It is possible to argue that purely symbolic factors enter people's preference functions, but this verges on tautological. One would expect, in view of the widespread popularity of nationalism, especially in countries with successful economies, that positive economists would be more inclined to see the interests of large numbers of individuals, not small, in it.

Chandler's view, for example, may and may not be true for the largest corporation in Canada, Hydro-Québec. One of the explicit reasons for the nationalization of the remaining private firms in the province in the early 1960s was to provide a training ground and management opportunities for an emergent francophone middle-class. Chandler recalls that there has been nationalistic pressures on all political parties in Quebec. The nationalistic goal in setting up Hydro-Québec may well have been socially efficient. The private firms nationalized were controlled largely by Anglophones. Efficiency may have been served if there was discrimination against Francophones in these firms. This is possible even if the private firms were performing as efficiently as possible: bounded rationality could be a cause of discrimination, and the bounds could be loosened by francophone managers, if they are more capable of evaluating other Francophones. One

generation later, this particular public firm appears no less competent than a private firm would be.

It is in the area of promotion that the calculus of instrument choice would seem to be most relevant to the Crown corporation. For example, regulated private transportation and communications firms can and do substitute for public firms in Canada. Within government departments, geological surveys facilitate exploration for minerals by private firms. The reason for this easy substitutability may be that the Crown corporation will not encounter substantial ideological opposition. As the functions become more nationalistic, however, what Tupper calls the balance between private and public economic power is touched, and opposition is increased. The Economist (1978, p. 55) and others mention the overwhelming influence of the United States as a factor in the establishment of Canadian Crown corporations. But in the resource industries, surely a vital component of the Canadian economy, the "pragmatic" approach runs into the same two questions: Why so few? Why so late? An obvious case in point is the Quebec asbestos industry.

Gélinas (1978, p. 15), in summarizing researches into the public firms of several countries, notes that the second wave of nationalizations, after the major facilitative infrastructures, were the energy industries. In most countries, this occurred long

before the oil crisis; the goals were assurance of supply and the ability to influence the development of key industries.

Pratt (1982) is confident that the international oil industry of the 1980s and beyond will be controlled by state-owned firms. He views oil not simply as another commodity but one which plays an important role in every important economic sector, a public good too important to entrust to a highly politicized market. Thus, he views the role of the state that would be dictated by market-based considerations, one limited to licensing, regulating and collecting economic rent, as untenable. Contrary to the view studied in the first section of this paper, he asserts that governments create national oil companies, not to maximize rents, but as policy instruments. The four goals of these enterprises are (1) to secure energy supply, by purchase or discovery; (2) to enhance the state's knowledge and control of the industry; (3) to maximize the state's share of total economic benefits; and (4) to promote the interests of domestic capital owners.

Lewin (1982) finds that in eight countries in Western Europe, public enterprises dominate many strategic sectors of the economy including energy. (See also the chart in The Economist, 1978, which is reproduced in Borcherding, 1983.) The public energy sector, with rare exceptions, he observes, is consistently profitable -- a factor which may, as in the case of private sector, reflect the existence of rents. One reason adduced for

the importance of the public firm is to counteract the threat of American multinationals. The "yardstick competitor" role of Petro-Canada may be more fruitfully viewed in this way than as a watchdog against the repercussions of oligopoly on the consumer. While he has a clearly different Weltanschauung from that of Pratt, Lewin, too, notes that the purpose of the public enterprise is to be a tool of government to control social, political and economic destinies.

The argument here, then, is that the state oil firm is intended to change the direction of and to gain control of a vital sector, away from dependence on a market which few maintain operates well and many regard as capricious, i.e., to plan the industry. Many have observed that, when a Crown corporation is established, its goals are not clearly defined, and that they evolve as circumstances change. In the thrust towards control by the state, regulation and other instruments of government policy must be viewed as complements rather than as substitutes. An obvious case in point is the National Energy Program, which put the Crown firm, Petro-Canada (and a hinted-at competitor), into a package with regulation, taxation, price setting, licensing, royalties, differentiated subsidies, infrastructure investment, exhortation, tax breaks, etc.[6] Another example is Potash Corporation of Saskatchewan, which was a (belated) part of a total strategy including a provincial marketing scheme, and taxation and royalties.

The natural resource rents remain. But in this context, the use of the rents is of at least as much importance as the collecting of them. If the instruments of the state are used to control the industry, there will be a slippage of rents. The Crown hydro firms have never wavered from their policy of average cost pricing. This practice has had much in common with oil price regulation in Canada, especially in years since economies of scale in electricity generation have been exhausted and marginal costs have been rising. In the 1970s, the Government of Saskatchewan aimed to control an important and lasting resource-based industry, potash, within the province, not simply to collect rents. The potential uses of rents were at the root of the concern about the growth of the Alberta, and to a lesser extent Saskatchewan, heritage funds. It is not unreasonable to suppose that Société Nationale de l'Amiante may never be a rent producer.

That Canada should travel this road is not surprising. Natural resources have always been the key to Canadian growth. Nelles (1974, p. 223) explained public ownership of Ontario Hydro as follows: "The frustrations of retarded development and metropolitan social tensions operating within a statist political tradition -- best reflected in public ownership of the waterpower itself -- were the key causal factors." There has since been the example of the success of public ownership of the hydro firms. Yet, as Tupper and Doern (1981) point out, historically the Canadian state has played no major, direct entrepreneurial role in

the resource industries. The chart of The Economist reveals that as late as the beginning of 1979, nearly all of the oil, gas and coal industries of Canada were in private hands. Richards and Pratt (1979) describe a short-lived and relatively minor thrust in this direction in Saskatchewan under the C.C.F. in the 1940s. But two questions continue to haunt us: Why so few? Why so late?

If the view presented in this part of the paper is accepted, then it would appear to be pointless for economists to analyze the characteristics of enterprises which would make a public enterprise an appropriate instrument choice (i.e., make it less likely to be inefficient), from a property-rights, managerial-incentives point of view. The thrust to government involvement will make itself felt in whatever industry the government perceives to be important, regardless of characteristics of the resulting property rights. Indeed, on the view presented here, one purpose of the public firm is to establish different incentives for the bureaucrats who run public corporations from those faced by the bureaucrats who run private corporations. Creating jobs through development of the economy may, for example, be more compatible with empire building than with profit (rent) maximization.

It is with these considerations in mind that we may briefly consider some of the controversial activities of Petro-Canada under the National Energy Program. They will all be related to the efficiency of social investment in this particular industry.

One of the important advantages of competitive markets is their encouragement of a diversity of views and of management "styles" and techniques: anyone who doubts the conventional wisdom of a staid and stuffy, or even vigorous, industry can invest according to his own wisdom and, if right, garner a large entrepreneurial rent. In fact, in a country with as high a savings rate as Canada, this diversity of viewpoint and technique is surely the only reason to want to encourage foreign investment.

Many public firms are set up as monopolies. In this way, the diversity-of-views advantage of the private market is lost. This is (by definition) of particular importance in an entrepreneurial market, as many economists have pointed out, basing their reasoning on the economics of property rights.

One of the political aims of the National Energy Program was to encourage the "Canadianization" of the oil industry to at least 50 per cent by 1990. Petro-Canada was to be an important instrument in that process. The first acquisition by Petro-Canada after the announcement of the NEP was of Petro-Fina, Ltd., a Belgian firm: at the same time as the industry was becoming Canadianized, it was becoming continentalized. The Canadian oil industry lost the benefit of the possibly different management style of a small, francophone, European firm, based in Montreal rather than Calgary or Toronto. (For example, such a firm may have been less uncomfortable working with an "interventionist"

government against the role of the "majors".) Oddly, then, one result of the NEP has been to satisfy the aims of both nationalists and continentalists at the cost of the international interdependence which, we are often told, is the way of the future.

On the other hand, some increase in diversity is provided by simply having more firms. Borcherding (1983, p. 136) concludes that both the characteristics of property rights and the effectiveness of competition have an influence on efficiency. In this regard, it would have been a very useful experiment to set up a Crown competitor to Petro-Canada, as suggested at one point in the NEP. This idea, unfortunately, seems to have been dropped.

The second acquisition after the implementation of the NEP was of the marketing assets of British Petroleum, one of the famous Seven Sisters of the world petroleum market. Some have criticized this purchase as having been purely politically motivated. This is probably true. Yet, from a property rights perspective, the marketing of gasoline may be one of the more appropriate, or at least less undesirable, activities for a public firm. It is easily monitored, and is quite managerial. If private entrepreneurship is so rare in this country that it must be imported to the extent of having a substantially foreign-owned economy, it would seem wasteful to use it (be it domestic or foreign) in franchising gas stations.

These comments may seem somewhat puckish; they are made to illustrate how economists and politicians may have been talking at cross-purposes, while economists do have something to offer that may be wanted by politicians.

4. CONCLUSION

This paper began with a consideration of the collection of mineral resource rent as a rationale for the Crown corporation, a rationale with roots in nineteenth century liberal economic thinking. Our consideration led to the conclusion that a public firm charged with the maximization of rent, and hence stripped of other social obligations, can be economically efficient. That is to say, there seems to be little theoretical reason that can be adduced for a conclusion that the public firm would be substantially less efficient than a private firm. Still, it was concluded that the Crown corporation was unlikely to be used in this way.

We have also found that the main theories of the public corporation based on economic theory, relating to property rights and to substitutability of governing instruments, are incomplete approaches. To provide an adequate description of the functioning of the Crown corporation in the mineral sector, they must be leavened by inputs from the political science literature.

In particular, it would appear that the establishment of Crown corporations in the exhaustible resources sector since the 1970s has been done as part of a major thrust towards public control of all aspects of the industry and of the use of resource rents, rather than simply a means of collecting rents or of, as in

previous decades, bailing out failing operations for employment maintenance. The reason for this has been a perception of the industry as a key sector in the functioning of the economy in question. A comprehensive use of several governing instruments, rather than just the Crown corporation, has been observed. This is true of provincial initiatives, for example in asbestos in Quebec and in potash in Saskatchewan, as well as federal initiatives in oil and gas.

This trend has been found to be true in the case of most other Western countries as well. Indeed, despite the relatively great historical and continuing importance of the natural resource industries to the Canadian economy, many of these countries initiated such measures as the public firm well before Canada. This observation has prompted, rather than the usual question of, "What is the rationale of public enterprise?," two recurring questions from a different angle: Why does Canada have so few Crown firms in the mineral sector? Why have they been established so late?

The political trends which may seem to neglect considerations of economic efficiency should not, however, put economists on the sidelines of political analysis. For example, in the early part of the paper on resource rent, it was argued that in a Crown corporation, there appears to be an internal incentive towards a market orientation similar to that in private firms in industries

with the same structure. Evidence for this may be seen in the article in The Economist (1978, p. 38), in which it is asserted that, throughout Europe, the managers of public firms have been demanding the "right to succeed." Tupper and Doern (1982) report this same trend in Canada, at Air Canada and Canadian National. Given the existence of resource rents, it will likely affect firms in the resource industries, such as Petro-Canada and Potash Corporation of Saskatchewan.

If the government wishes to direct the Crown firm, and especially if it compensates the firm for undertaking unremunerative activities, there is a potential for the encouragement of X-inefficiency. One possible solution to this problem, given recent work indicating the importance of market structure, may be to set up competing firms within the Crown sector, possibly reporting to different ministers or even different governments. There is to now, however, no evidence on the effects of having competing public firms. This device would still not reduce incentives to over-investment in subsidized high-risk exploration, incentives which would also seem similar to those facing the private sector. Elimination of the subsidies and retention by the government of resource rents would be the only way to limit these incentives.

NOTES

1 In this case, social responsibilities are viewed to be not significantly greater than the "social responsibility" and "good corporate citizenship" goals of private corporations.

2 These "rules of thumb," of course, are biased attempts to estimate the appropriate economic theoretic measures. See, for example, Solomon (1971); Stauffer (1972).

3. We use the term "at least as much" because this is the effect in the absence of personal and corporate income taxes.

4. One might note also that successful performance is not gripping news to the media, and it is considered bad form for a government to advertise its successes.

5 One way of reducing the purchase price is to impose high taxes on the firm. But this begs the question of whether the public firm or taxation is a more effective rent collector.

6 The contrast of the National Energy Program of 1980 to the facilitative (promotional) National Oil Policy of 1961 is illustrative of the distinction made in this section.

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CROWN CORPORATIONS AND COMPETITION POLICY

by

Jean Brazeau and Cathy Schutz
Bureau of Competition Policy

RÉSUMÉ

L'efficacité des sociétés d'État comme outil politique sur les marchés oligopolistiques risque d'être réduite en raison de leur immunité contre les lois sur la concurrence. L'imprécision et l'étendue du mandat de ces sociétés incitent le plus souvent les directeurs à agir dans leurs propres intérêts et à placer l'emphase sur les profits plutôt qu'à agir dans l'intérêt du public et à maximiser le bien-être de la société. Dans un marché oligopolistique, les collusions constituent un moyen facile de maximiser les profits et ne manquent pas de survenir si elles ne sont pas punies dès qu'elles sont décellées. Compte tenu de cette réalité, il est probable que les sociétés d'État s'adonnent à des activités collusoires; les cas échéant, elles favoriseraient les situations de monopole sur le plan des prix et de la production au lieu de les décourager. Nous affirmons que l'immunité inconditionnelle actuellement accordée aux sociétés d'État contre les lois sur la concurrence est injustifiée.

ABSTRACT

The effectiveness of agent Crown corporations as a policy instrument in oligopolistic markets may be reduced due to their current immunity to competition law. Because of the vagueness and broadness of Crown corporation mandates, their managers are more likely to act in their own interests and maximize social welfare. In an oligopoly, profit maximization can be achieved through collusion and collusion is more likely to occur if not punished when detected. Given these facts, it is not unlikely that Crown corporations will engage in collusive activities; and, if such is the case, they will contribute to monopoly pricing and output decisions rather than alleviating them. We contend that there is no justification for the unconditional immunity to competition law which is presently granted to agent Crown corporations.

INTRODUCTION

The Supreme Court recently decided that two Crown corporations, Uranium Canada Ltd. and Eldorado Nuclear Ltd., charged under the Combines Investigation Act, were immune to prosecution because of their agent status. This has set the precedent whereby all agent Crown corporations are immune to prosecution under the Act.

This paper examines how the legal status of agent Crown corporations affects their impact as a policy instrument.

The paper first describes the creation of Crown corporations, how agent status is granted, and how the immunity of agent Crown corporations arose.

The paper then examines how the interaction between Crown and private sector corporations in oligopolistic markets is affected by the immunity of agent Crown corporations.

The reliance on Crown corporations as instruments of public policy is extensive, and their impact on the economy is significant. At the federal level alone, there are 34 government corporations which are currently classified as Crown agents. These corporations account for over $37 billion in assets or close to 70 per cent of total federal government corporation assets.[1]

It is shown that immunity of agent Crown corporations has no positive impact on social economic welfare. Crown corporations are better able to improve performance in imperfect markets if they are subject to the same business laws as are the private corporations they compete with. Therefore, there is no justification for the across-the-board immunity of agent Crown corporations to competition law.

LEGAL ENVIRONMENT OF CROWN CORPORATIONS

The incorporation method of Crown corporations is important as it establishes the legal environment in which they operate. Crown corporations are created by an Act of Parliament or by articles of incorporation under the Canadian Business Corporation Act (CBCA).

The mandate and financial management of a corporation created by special constituent act are established by Parliament and can only be modified by it. The constituent act may specify the capital structure of the corporation, the borrowing powers of its officers, the auditor who will review the corporation's financial performance, the preparation and submission of annual reports, and the approval, by Parliament, of annual capital budgets and investment projects.

Crown corporations and other government corporations incorporated under the CBCA are subject to the same rules and regulations which apply to privately incorporated companies.

A number of Crown corporations are constituted agents of Her Majesty. A corporation may be an agent of Her Majesty by contract, by statute, by common law, or by order-in-council. A contract agency corporation enters into an agreement with the Crown to carry out activities under the control of Her Majesty.

The contract may expressly provide that the corporation shall, for the purpose of the contract, be a Crown agent.

A statute (incorporation statute, Crown corporation acts, Financial Administration Act, etc.) may expressly provide that the corporation is, for all purposes of a particular act, an agent of Her Majesty; and that the corporation's powers may be exercised only as an agent of Her Majesty (e.g., Petro-Canada, Canada Mortgage and Housing Corporation, Hydro-Québec, Saskatchewan Potash Corp.).

When the incorporating statute does not specify the status of the corporation and there is no agency contract, the Courts will decide whether a Crown corporation is an agent. This is done by examining whether they are in substance to carry on Her Majesty's affairs. The Courts will examine the extent of Her Majesty's control over the corporation: the more independence and discretion the corporation has, the less likely it will be found to be an agent.

The last provision, because of its broad application, is important. For example, are Canadair or De Havilland agent corporations? Since both corporations are under the close direction and control of Her Majesty, they could be found agents of the Crown. As a result of these provisions, the list of corporations categorized as agents may be longer than suspected.

Finally, the Government Companies Operation Act (GCOA) empowers the Governor-in-Council to declare any Crown corporation to be an agent of Her Majesty.[2]

Uranium Case and Consequences

The case that brought the issue of agent immunity from the Combines Investigation Act, and the potential impact on market behaviour into sharp focus, was Her Majesty the Queen v. Uranium Canada/Eldorado Nuclear Ltd.

In 1977, an inquiry into the marketing of uranium in Canada was started as a result of a directive by the Minister of Consumer and Corporate Affairs. In May 1981, the evidence obtained during the inquiry was referred to the Attorney General, charged six Canadian uranium marketing companies with having conspired to lessen, unduly, competition in the production, manufacture and sale of uranium in Canada.

Two of the companies charged, Eldorado Nuclear Ltd. and Uranium Canada Ltd., are federal Crown corporations. In March 1982, counsel for these corporations sought an order of the Supreme Court of Ontario prohibiting a preliminary trial in the Provincial Court. The basis of the application was the contention that the two corporations were, at all times, agents of the Crown, exercising their powers in a manner consistent with the purposes

of their Acts and were thus immune to prosecution. This argument is based on Section 16 of the Interpretation Act which states: "No enactment is binding on Her Majesty or affects Her Majesty's rights or prerogatives in any manner, except only as therein mentioned or referred to." The Supreme Court of Ontario ruled in their favour. The Court of Appeal also ruled in favour of the corporations before the matter was brought before the Supreme Court of Canada.

The question at issue was whether Uranium Canada Ltd. and Eldorado Nuclear Ltd. were immune from criminal liability under s. 32(1)(c) of the Combines Investigation Act,[3] because they are agents of the Crown. In addressing this question, the Court decided two issues: does the Combines Investigation Act bind the Crown, and if so, do the corporations enjoy the immunity of the Crown?

The Court's position on the first question was that the current common law stance embraces a broad notion of Crown immunity. Moreover, the Court argued that Parliament had taken this concept one step further in Section 16 of the Interpretation Act by removing the necessary implication exemption. The Court found that no section of the Combines Investigation Act purports to make it applicable to Her Majesty. Therefore, the Act is not binding on the Crown or its agents.

The Court then addressed the question of whether Uranium Canada and Eldorado shared the Crown's immunity. Here again two issues had to be decided: are both companies agents of the Crown, and were these companies acting within their authorized purpose?

In both cases, the majority decision concluded that the corporations were, by statute, expressly made agents of Her Majesty. Uranium Canada was expressly designated as agent of Her Majesty in the Atomic Energy Control Act. As for Eldorado, in 1946 the Governor-in-Council issued a proclamation directing the Government Companies Operation Act to be applicable. This proclamation made Eldorado for all its purposes an agent of Her Majesty. Moreover, the Court decided that because there was no indication that either corporation had acted outside its corporate objectives, each was exempt from the Combines Investigation Act as an agent of the Crown.

This decision sets the precedent that all agent Crown corporations have prima facie exemption from competition law.

Moreover, while the Supreme Court did not explicitly address itself to the issues raised for the co-indicted private sector corporations, the Attorney-General held the view that, in the interest of fairness and equality before the law, the case against these corporations could not be proceeded with.

This position resulted in a de facto extension of immunity to private sector corporations. This immunity could potentially be extended to all private corporations operating under similar circumstances.

The agent exemption from competition law, the general application of the GCOA and the de facto immunity, which could be granted to private sector corporations taking part in anti-competitive agreements with agent Crown corporations, may contribute to lessening the effectiveness of Crown corporations as instruments of public policy.

Competition in a Hydro Oligopolistic Market

In Canada, many Crown corporations operate in industries which are characterized as oligopolistic. Oligopoly is a market structure in which institutional or /technological constraints restrict entry; therefore, producers are few and their actions are interdependent. When the interdependence between producers is recognized, collusion may follow in order to maximize joint profits. As a result, prices are higher than the competitive level and output is restricted to the detriment of consumers. A Crown corporation is one policy instrument which has an impact on economic performance in oligopolistic markets. Throughout, this analysis is confined to Crown corporations which serve this purpose.

The rationale for the introduction of a Crown corporation in an oligopolistic market is that it can act as a yardstick competitor.[4] When competition is sufficiently weak and market imperfections exist, creating less than optimal performance from private corporations, the introduction of an efficient public corporation can improve economic performance; in addition, it may be the most effective and least socially costly method of doing so. First, the introduction of a Crown corporation may be less costly than direct regulation which requires the continuous accumulation of data to monitor price and cost conditions. Second, the introduction of a Crown corporation may be more effective than competition law because when the number of firms in an industry is small and tacit collusion is feasible, law enforcement becomes difficult. A Crown corporation, by being a part of the industry, has access to a great deal of information on price and cost and responds quickly to changes in demand.[5]

The goal of the Crown corporation is to exert competitive pressure on the industry: it does this through its output decisions. By producing a level of output at which price equals marginal cost, it maximizes its contribution to social welfare, defined here as the total of consumer and producer surplus. Because the actions of the Crown corporation influence its private competitors, they will be forced to also price competitively if they wish to remain in the market.

By placing the public firm in a position of having the last word, a competitive outcome is possible. Crown corporations in general have greater financial resources and are granted privileges which provide them an advantage over private sector corporations; thus, they can pose a viable threat and insure optimal output. Crown corporations are able to borrow more readily and at lower cost than are their private sector competitors because their liabilities are backed by the federal or provincial governments. Crown corporations are often granted special status; for example, Petro-Canada has preferred access to unexplored frontiers. These and other advantages (e.g., exemption from taxation) allow the corporation to influence the conduct and performance of the industry.

The impact a Crown corporation will have on an industry is a function of the behaviour of its managers. In practice, the behaviour of a corporation's managers is dictated by the objectives set out for the corporation by its owners, the owners' ability to evaluate the performance of the corporation, and the legal and institutional environment it must compete in. Although many managers strive to meet corporation objectives, it does not necessarily follow that they are privately motivated, solely or even mainly, by a desire to meet these objectives <u>per se</u>.

Managers in private sector corporations and Crown corporations are privately motivated to attain goals which are a combination of

self interest and corporate/public interest, respectively. If society has established the proper institutional arrangements, then the private motives of managers will lead them to behave in a manner consistent with achieving corporate objectives.[6]

In the case of private sector corporates, there are effective control mechanisms to ensure this outcome. The stock market gauges, among other things, managerial efficiency. A poorly managed corporation will have a stock market value lower than the worth of the corporation. If the lower share value is a result of inefficient managers, they will be replaced by being voted out or fired by shareholders, or the firm may be taken over by a more efficient corporation.

In the case of a Crown corporation, no such discipline exists because all the shares of the corporation are held by the government. Instead, the government has instituted various control and accountability measures to evaluate the performance of Crown corporations. This arrangement falls short on two counts.

First, the objectives of Crown corporations are very broad and ill defined.[7] Second, the control and accountability measures which do exist to monitor and evaluate Crown corporations' performance are inadequate.[8] Commercial Crown corporations have characteristics of government bureaus as well as of private

corporations. Like government bureaus, they fulfill social objectives and require Parliamentary approval of their financial plans. Like private corporations, Crown corporations fulfill commercial objectives and the output they produce is evaluated in markets independent of the organization itself through voluntary transactions. In general, it is not readily apparent which objective is the more important; and as a result, there are no clear performance indicators.

The behaviour of Crown corporation managers depends largely on their interpretation of the corporations' objectives. Although the incentives of managers are not known precisely, several factors may be identified which would lead a Crown corporation to adopt a strategy more in line with profit maximizing than welfare maximizing.

Crown corporations operating in contemplation of profits and earning a return on investment through the sale of goods and services receive most of their revenues from their market activities. It is also a part of the mandate of some Crown corporations (eg., Petro-Canada, Air Canada, CN) to earn profits. In addition, most public criticism of Crown corporations is directed at their economic performance.[9] Finally, if the managers of these corporations are concerned with maintaining their prestigious, secure and high-salaried positions, then the incentive exists for them to avoid conflict and controversy in the

face of public scrutiny. One method by which the Crown corporation could do this would be to attach less weight to social welfare objectives and more to earning profits substantial enough that public funds are not necessary; and profit performance does not attract public attention.

The broad and imprecise mandate of Crown corporations and the lack of effective controls ensure the necessary degrees of freedom for the managers of Crown corporations to pursue a goal of profit making.

In a hybrid oligopolistic market, if the Crown corporation seeks to maximize profits as opposed to social welfare, the outcome may be socially inferior. It should be noted that a blanket objective of profit maximization for Crown corporations is improbable. If the nature of the market imperfection is such that it could be corrected by a profit maximizing corporation, why could not this objective be fulfilled by a private rather than public corporation. Profit making behaviour on the part of Crown corporation managers is a more tenable assumption.

As stated earlier, in an oligopolistic market, firms can have a substantial impact on prices. If the public firm was to maximize profit through collusion, this would result in monopoly prices and output.

In an oligopolistic industry, managers do have an incentive to collude in order to maximize joint profits. A priori, in the absence of specific directives or controls, managers of Crown corporations will also have incentives to collude, tacitly or otherwise, in order to increase profits. Collusion is made even more likely if institutional safeguards are not operative.

In the case of agent Crown corporations, their exemption from the Combines Investigation Act has removed an important incentive for them to behave in a competitive manner. Because of the exemption, there is little legal risk for the Crown corporation which participates in anti-competitive activities. In addition, since this exemption could be extended, albeit de facto, to the private sector firms, the entire industry could become exempt from the Combine Investigation Act. In fact, it would be advantageous for private firms to pursue the inclusion of a Crown corporation in their illegal activities to increase profits in order to evade the law. Under this scenario, the Crown corporation, instead of alleviating the potential for monopolistic pricing, may contribute to it.

Although the concern raised here applies only to a handful of corporations -- agent Crown corporations -- the possibility of such situations arising has been shown by the Uranium Case. Crown corporations have already exhibited hostility towards competition policy in the past.[10] To exempt them from the Act does not serve any desirable social objective.

CONCLUSION

Bringing Crown corporations under the Combines Investigation Act will increase the chances of success in using them as policy instrument for improving performance in oligopolistic markets.

There is no advantage to society by granting Crown corporations immunity from competition law. In fact, because the exemption can encourage collusion among corporations and give rise to opportunity for agent and private corporations to act anti-competitively, social economic welfare is further reduced by the exemption.

The Combines Investigation Act is a general law of general application, enacted to protect the public interest in competition and promote efficient allocation of resources. The example provided in this paper is only illustrative of the possible impact exemption from competition law may create. The immunity provided to agent Crown corporations is general, meaning that agent Crown corporations are exempt from all sections of the Act. This includes areas of monopolization, predatory pricing and bid-rigging.

Bringing all Crown corporations the Act will provide incentive for them to behave in a more socially optimal and efficient manner and compete fairly with private sector corporations.

Notes

1 Public Accounts of Canada, "Financial Statements of Crown Corporations," Vol. 3, 1982.

2 For a detailed discussion of the possible impact of the GCOA provision and the legal environment of federal Crown corporations, see Kirsch (1981).

3 Section 32(1)(c) of the Combines Investigation Act states: "Everyone who conspires, combines, agrees or arranges with another person to prevent, or lessen, unduly, competition in the production, manufacture, purchase, barter, sale, storage, rental, transportation or supply of a product, or in the price of insurance upon persons or property, is guilty of an indictable offence and is liable to imprisonment for five years or a fine of one million dollars or both."

4 Green, C., Canadian Industrial Organization and Policy, McGraw-Hill Ryerson, 1980.

5 Harris and Wiens, "Behaviour of a Government Firm in Oligopolistic Situations," Carleton Economic Papers, 77-05, and "Government Enterprise: An Instrument for the Internal Regulation of Industry," Carleton Economic Papers, 77-13.

6 Downs, Anthony, Inside Bureaucracy, Boston: Little, Brown & Co., 1967.

7 Sexty, R.W., "Government Owned Corporations in Canada," Memorial University of Newfoundland Working Paper, 78-10.

8 "Accountability of Crown-Owned Corporations," Report of the Auditor General of Canada to the House of Commons, Chapter 2, 1982.

9 Numerous newspaper articles and editorials reflect this view with regard to Crown corporations in general and particular corporations, e.g., "Trouble not exclusive to Crown firms: P.M.." Globe and Mail, June 28, 1983; and "Tories defend Auditor-General on review of Canadian National," Globe and Mail, September 22, 1983.

10 Examples of the hostility of Crown corporations to competition law include:

a) The Post Office's attempts to have the widest possible definition of a letter incorporated in its statute in order to ensure its monopoly in subsidiary areas.

b) CN's attempts to obtain an exemption from a prohibition against price fixing in the U.S.

c) Air Canada's opposition to deregulation and rate competition.

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