

Creating Competitive Markets

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THE POLITICS OF
REGULATORY REFORM

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editors

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The Political Economy of Deregulation in Canada

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This is an opportune time to review the current state of deregulation in Canadian markets for electricity, telephony, and airlines, and to compare it with the U.S. experience. Deregulation has been in place long enough and enough problems have arisen in the transition toward competition to draw a number of lessons from those markets. These problems include shortages and consumer intolerance to high prices in electricity markets, a slow (in relation to prior expectations) rate of entry of competitors into local telephone service, and bankruptcies in the airline industry, even in the case of the dominant domestic carrier, Air Canada. The industries are structurally similar—each composed of a network in which some services can be competitively supplied but others exhibit features of a natural monopoly—and thus the policy issues connected with the deregulation of each overlap considerably. These issues are of wide interest because the industries in which they occur have a prominent place both in the Canadian economy and in the deregulation movement there.

Our benchmark for the normative evaluation of government policy across these industries is the maximization of economic efficiency, as measured by the sum of benefits to consumers and to shareholders of firms in each industry. This objective requires elaboration in two respects. First, it might seem

possible to increase consumer benefits and even total benefits by treating capital invested by incumbent firms under traditional regulation as a sunk cost and not requiring current prices to cover a fair return to that capital. We assume, however, that the government should not renege on the implicit regulatory compact it has with firms that invested capital under the original rate-of-return regulation. For the sake of long-run efficiency, the state's commitments must be credible. Second, a more subtle aspect of designing efficient government regulation is that one must, paradoxically, incorporate the inability of government to commit to the goal of efficiency in future regulatory policy. As a result, political constraints must be taken into account in the analysis.

In the current period of deregulation, the role of political constraints in developing industrial policy varies markedly across industries. In the deregulation of telephony, for example, political resistance has been weak, given the lower prices for long-distance calls and technologically induced lower prices for the average bundle of telephony services. Most consumers have unambiguously been better off after deregulation than they were before. In contrast, resistance in the electricity sector has been strong, among citizens and politicians alike. When a move to greater efficiency triggered a sharp rise in electricity prices in Ontario, political constraints led to major distortions in electricity prices. This resistance is puzzling from the perspective of traditional political economy thinking and a factor that must be dealt with in a successful transition to greater reliance on market forces.

The most important lesson for future regulatory policy is that political constraints must be factored into policy design. In electricity, for example, a solid commitment by the government never to intervene in constraining future price increases—were such a commitment possible—might attract enough generation capacity that political pressure for limiting price increases would not arise in the future. But the design of regulation today cannot pretend that a policy will be immune to future political pressure to protect particular groups from the shock of excessive prices. It must take politics seriously by incorporating the constraint of no future government commitment to an efficiency-maximizing policy designed today (often referred to as the problem of “time inconsistency”). A related and well-established problem is that even efficiency-enhancing policies may be politically infeasible if the policies also involve substantial transfers of wealth away from organized interest groups. Attempts at deregulation must anticipate political obstacles to reform even at the cost of some reduction in total efficiency. A less-than-ideal reform that is robust enough to resist future political pressures is better than an ideal reform that will not survive in the political arena.

Electricity

Only two Canadian jurisdictions—Ontario and Alberta—have attempted significant restructuring of the electricity sectors by moving from the traditional, vertically integrated, regulated monopoly paradigm to a competitive paradigm, at least in electricity generation. The Ontario case merits particularly close attention because it was unsuccessful. The story of reform in Ontario is one of establishing a market mechanism for electricity prices but ultimately failing to commit to the restructuring of the market.

Reform in Ontario was motivated in part by the faith in markets of a Conservative government elected in 1995 and in part by enormous growth in the debt of the government-owned electricity company at a time when the provincial budget deficit had risen to historically unprecedented levels. The incoming government vowed to eliminate this deficit. The debt was the result of the province's failed investment in nuclear energy, which incurred major cost overruns and left as many as eight of the province's twenty nuclear power plants out of service at the same time.¹ By the mid-1990s, electricity debt had reached one-third of the entire provincial government's debt. In tackling the issue, politicians seriously erred in promising lower electricity prices with electricity reform, when economic efficiency and fiscal demands clearly pointed to the need for higher prices. Meanwhile, the investment in generation failed to materialize, constraints on imports tightened, and overall demand increased, leaving consumers vulnerable to rapid price increases when the weather turned exceptionally hot in the summer of 2002, shortly after market opening. Responding to public outrage over high electricity prices, the government (retroactively) set a price ceiling between 4 and 5 cents per kilowatt-hour. This was at times less than half of the marginal cost of electricity (not to mention the contributions to the enormous costs of capital that regulated prices should provide). The upshot was shortages of electricity as well as a deepening of the government debt that had inspired reform in the first place. We believe this outcome was predictable and could have been avoided had reform been designed with the constraints imposed by politics in mind.

Before reform, electricity generation and transmission were in the hands of a government-owned monopoly, Ontario Hydro, while distribution was handled by municipality-owned companies. In response to Ontario Hydro's mounting debt problems, the government embarked upon a restructuring program beginning in the mid-1990s. However, debt continued to accumulate: by 1999 Ontario Hydro's provincially guaranteed debt was approximately

Can\$38 billion against assets of only Can\$17 billion, leaving a “stranded” debt of Can\$21 billion.² Meanwhile, the price of electricity in Ontario was frozen for several years after a 30 percent climb in the early part of the decade.³

The framework for the reformed electricity market was set out in the Electricity Act of 1998.⁴ The act established plans for a wholesale electricity market in Ontario, eventually opened in May 2002, and split Ontario Hydro into two companies, separating the transmission and generation components. These new firms, Hydro One and Ontario Power Generation (OPG), began their operations in 1999, still as fully state-owned entities. Hydro One then bought up a number of local distribution companies. While it is not clear what objectives a state-owned monopoly is likely to pursue, to preclude the possibility of OPG using its dominant position to exercise market power, OPG entered into a market power mitigation agreement (MPMA) with the government.⁵ Under the agreement, the OPG became subject to a wholesale price cap and was also required to divest enough of its price-setting generating units to reach a level of 35 percent within three and a half years of market opening and to reduce its market share of total capacity to no more than 35 percent within ten years of market opening. In addition, Hydro One undertook to make best efforts to increase inter-tie capacity with neighboring jurisdictions by 50 percent within three years of market opening.⁶

Two government agencies oversee the province’s electricity market: the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO). The IESO operates the wholesale spot market and performs the dispatch function; its independent Market Surveillance Panel was assigned the task of monitoring market power abuses (now transferred to the OEB). Initially, OEB’s primary function was to regulate the monopoly segments of the electricity market (that is, transmission and distribution rates), although it now also regulates retail electricity prices. Market rules developed by the Market Design Committee—a multistakeholder group charged with the task of “regulatory negotiation”(reg. neg.) and primarily administered by the IESO—run to hundreds of pages, a vastly more complex regulatory environment than existed before deregulation.

When the wholesale market for electricity opened in 2002, the wholesale price was initially about 3¢ per kilowatt-hour but doubled (on average) over the first year. In November 2002, in response to mounting public outrage at the high summer electricity prices, the Conservative government announced its intentions to reimburse consumers for the high prices of the summer and freeze retail prices until 2006; it also directed local utilities not to cut off

service to customers who could not afford to pay their electricity bill. The Electricity Pricing, Conservation and Supply Act of December 9, 2002, lowered and froze the retail price of electricity at 4.3¢ per kilowatt-hour for low-volume and other designated consumers (that is, municipalities, universities and colleges, public and private schools, hospitals and registered charities), as well as for those who had signed fixed-price contracts with retailers.⁷ The freeze covered approximately half of the province's total electricity consumption. Wholesale prices remained determined by market forces, with taxpayers footing the bill for the shortfall in retail revenues in relation to costs. Demand, of course, is governed by retail prices. With the price freeze, Ontario's experiment with competitive electricity markets was abruptly terminated after barely seven months.

Throughout the 1990s and beyond, domestic capacity declined and reliance on imports increased, creating what seemed profitable opportunities for private sector investment in generation. Little such investment occurred, however. Only two small new private generation projects became operational during the first year of the open market. The lack of private investment was due in large part to the two-year delay in market opening and uncertainty over the final rules governing the market. The delay was particularly costly because capital markets had lost confidence in the electricity sector following the California crisis of 2000–01 and the collapse of Enron in 2001–02. By the time the Ontario market opened in May 2002, investors had already come to view the North American electricity market as too risky and were deterred from investing in new generation capacity. Conditions within Ontario before the California crisis also kept private investment away. For one thing, investment was deterred by continued OPG ownership and control of most generation assets and the uncertain future status of nuclear units. For another, there were environmental constraints on the sale of OPG's coal-fired generation plants

Under policies established by a centrist Liberal government elected in 2004, Ontario consumers now pay somewhat higher government-administered electricity prices and greater prices for higher volumes. But the increases have been modest, all in the range of 4–6¢ per kilowatt-hour. The OEB has in addition released details for a "smart" meter, time-of-use price schedule with a commitment to install time-of-use meters in every home by 2010, and an interim target of 800,000 meters installed by 2007.⁸

The government has also established a new body called the Ontario Power Authority, whose function will be to contract with the private sector to build new generation capacity and reduce reliance on the (now distorted) spot

market as a signal for new investment. The need for new capacity has become even more urgent now that the government has decided for environmental reasons to retire all of the province's coal-fired generation plants (approximately 25 percent of total provincial generation capacity) over the next several years.

As in other industries that have been deregulated, electricity liberalization has the potential to move prices closer to marginal cost. But in the Ontario case, the nature of the industry and regulatory status quo called for *higher* prices. With public ownership and regulation of the electricity industry, prices did not reflect cost (as already mentioned, prices were frozen for almost a decade before deregulation). Just as prices above marginal cost create social losses, since some consumers willing to pay the cost of a product are priced out of the market, prices below marginal cost do so as well, since resources are devoted to supplying consumers who do not value the product as much as it costs to produce that product. Liberalizing the market and allowing retail prices to rise not only creates efficient incentives to invest in generation and transmission capacity but also increases efficiency by eliminating value-reducing transactions at prices below cost. However, Ontario experienced strong political resistance to higher electricity prices, and the government responded by freezing prices at low rates. As a consequence, the Ontario government has been underwriting massive losses, there has been no significant investment in generation or transmission, and incentives for consumers to conserve on electricity consumption have been severely attenuated, exacerbating existing imbalances in supply and demand.

The reasons for such apparently intense political resistance to higher electricity prices are not immediately obvious. To the extent that Ontario consumers, as consumers, gain through lower electricity prices, on average they lose even more (since subsidized prices lead to an inefficient use of provincial resources) as taxpayers because higher taxes are necessary to deal with the debt generated by buying high and selling low.

Why would citizens prefer a system in which they lose on net? Three theories may shed some light on this question. First, to the extent that some individuals are relatively intensive electricity consumers yet relatively insignificant taxpayers, they could gain by an electricity subsidy paid out of general tax revenues. This does not seem to be a plausible explanation of the apparently widespread political resistance to higher electricity prices in Ontario, however. Second, consumers today might rationally anticipate that the subsidy would be paid out of tax revenues only in the future and thus they may not bear the full cost of the subsidy since they may not be taxpayers then.

This is also not a plausible explanation. The strong political support in recent years in Ontario and elsewhere in Canada for balanced budgets indicates that voters do not want high public debt. A third reason, bounded consumer rationality, seems the most plausible explanation of the political salience of an inefficient electricity regulatory system. While calculating the impact of an electricity bill on one's budget is straightforward, assessing the impact of a Can\$700 million annual government expenditure from selling electricity below cost on any given consumer is complicated. The higher price of electricity has a salience and obviousness that potentially higher future taxes do not, and consumers will be influenced accordingly. Indeed, Ontario electricity consumers are accustomed to very low and stable prices because of the decade-long freeze that preceded attempts at deregulating. While they have grudgingly accepted volatile and increasing prices in similarly important industries such as petroleum and natural gas, they are used to consistent, low prices in electricity and resist any change to this situation.

The most obvious way to minimize political resistance to deregulation is to ensure that its benefits are well publicized. Admittedly, the benefits of pushing prices closer to marginal cost, particularly if this requires a sharp increase, are unlikely to be readily understood by consumers, who as individuals have little to gain from such an understanding. This problem was exacerbated in Ontario by the government's irresponsible claims that prices would fall following deregulation without mention of the conservation and budgetary benefits from higher prices.

Another strategy is to adopt policies that are irreversible, or at least very costly to reverse. Rather than attempt *ex ante* to persuade everybody of the benefits of deregulation, the government could commit to a course of action that in the longer term would be more likely to inform citizens of the benefits firsthand. In fact, some of the benefits of deregulation arise only if the government is firmly committed to adhering to its agenda (time consistency). For example, to create incentives for investment in electricity generation, private actors need to be assured that the government will not simply abandon floating electricity prices. Without such a commitment, generation capacity will not be built, prices will likely jump higher, and the government will be forced to do an about-face on deregulation.

A government can strengthen its commitment to deregulation in several ways. An important step is to privatize whatever government corporations are involved in the industry (as was done in the United Kingdom and the state of Victoria in Australia, two of the most successful electricity restructuring experiences). Provided that it does not simply turn a public monopoly into a

private monopoly but establishes a competitive market structure, privatization creates a political constituency in favor of deregulation: the firms (and their workers) that have invested in competing in the liberalized market. Once this constituency is active, the government will face countervailing pressure not to renege on its deregulatory plans. In contrast, the performance of the old Ontario Hydro and its two commercial successor companies, culminating in the firing or resignations of their respective boards of directors and senior officers, invites little confidence in continuing public ownership and operation of this sector. Oddly, the Conservative government in Ontario embarked on a politically controversial and unsuccessful attempt to privatize Hydro One (the transmission grid)—a natural monopoly whether publicly or privately owned—yet failed to seriously pursue an aggressive strategy of privatization and divestiture of generation assets that was crucial to the political economy of sustainable deregulation.

Another way of committing to deregulation may be, paradoxically, to involve the state directly in the market, at least at its inception. If the government were to offer up-front incentives to build electric generation capacity, for example, it would protect private investors from future regulatory reversals in two ways: it would lower the private investment required to enter the market and thus lower the private cost of possible future changes in policy; and by contributing to the building of generation, the policy would keep prices lower and avoid future pressure to revisit deregulation. Similarly, generating firms could be paid directly or indirectly to maintain excess capacity in generation, which would reduce the chances of price spikes or blackouts and thus political opposition to deregulation; such a strategy has been used in the United Kingdom, Pennsylvania-New Jersey- Maryland (PJM), and elsewhere. Such state intervention is not part of the textbook economic ideal of market allocation. The market and the prospect of high prices should do the job of providing incentives to invest in generation. But in the face of anticipated political pressure because of higher prices, these kinds of commitments may operate as sensible second-best strategies. State involvement early on can, ironically, guard against inefficient, politically driven state involvement later.

Another technique for managing political opposition to deregulation is explicitly to compensate losers. In Alberta, for example, following the initiation of restructuring in 1995, average wholesale prices tripled in the years 1999 to 2000. Retail consumers were then paid rebates of Can\$40 a month in 2001, funded from the proceeds of the auction of Power Purchase Agreements. It is important that such refunds be insensitive to quantities purchased; otherwise the expectation of refunds acts as a distortionary price

decrease. The government adhered to its commitment to restructuring and, partly as a result, approximately 2500 megawatts of new generator capacity was added to the Alberta system between 1998 and 2002 and another 5200 megawatts of new generation is forecast for 2003–06.⁹ In response, the average wholesale spot price in 2002 fell back almost to 1999 levels.

Efficient consumption might also be achieved by paying consumers for the amount they reduce their consumption in relation to some benchmark. Residential electricity rates in California are structured along these lines: consumers pay a lower rate for electricity up to a percentage of a benchmark for their residence, a higher marginal rate for a middle band of consumption, and a much higher marginal rate for electricity consumption beyond 130 percent of the benchmark amount. A similar alternative would be to continue to subsidize electricity consumption, but only up to some amount that covers basic residential electricity needs, with significantly higher prices for volumes consumed above this threshold, which would at least preserve conservation incentives at the margin (as the present Ontario government has partly done). Again, these alternatives are not as efficient as floating prices, since the regulator must assess the appropriate subsidies and benchmarks. But they avoid the absurd consumption incentives facing consumers paying prices well below cost for all their power, while managing political opposition by potentially lowering some electricity bills in relation to the status quo.

The performance of the electricity sector in Ontario since restructuring has been very disappointing. Elsewhere, results have varied, from success (at PJM in the United States, as well as in England and Wales and in Australia's state of Victoria) to similar disappointments, most notably in California. As pointed out in chapters 6 and 7 of this volume, the problems in California's restructuring had some *sui generis* characteristics: the market was poorly designed, with separate agencies administering the dispatch function and spot market; all transactions were forced through the spot market, with no chance of entering into forward physical or financial bilateral contracts; there were serious abuses of market power; a retail price cap forced utilities to absorb the difference between unregulated wholesale prices and regulated retail prices; and environmental constraints on investments in new generation and transmission capacity precluded effective supply-side responses to higher prices.

Like California, Ontario has weakly integrated regional markets, which the Federal Energy Regulatory Commission in the United States has had some success in ameliorating but the highly decentralized Canadian federal system has barely addressed.¹⁰ In contrast to California, Ontario appears to

have had nothing fundamentally defective in its market design, and the escalation in wholesale prices following market opening seems to have had no connection to abuse of market power. A more likely reason for Ontario's higher prices is that administered prices were set at inefficiently low levels for almost a decade before the restructuring. In addition, policy instability discouraged new private sector investment in the sector. This lack of investment has created a vicious circle dictating more rather than less government intervention to mitigate rising prices, further attenuating private sector interest in the sector.

The Ontario experience teaches that credible and politically sustainable regulatory commitments to effective restructuring are easily the most important determinant of success or failure, even if such commitments may require economically second-best policies to mitigate political economy impediments to effective restructuring. As Eric Patashnik insightfully argues in chapter 12, the political durability of deregulation initiatives depends on policies that reconfigure interests after deregulation so as to create new constituencies that will make significant investments in the new competitive regime. This political reality was never addressed by the Ontario government in initiating deregulation of the electricity sector.

Telecommunications

The forces that have shaped deregulation in Canadian telecommunications have been a blend of the “new politics of public policy,” driven by the power and appeal of particular ideas or philosophies of government as to the social good, and the “old politics” of entrenched interests, lobbying, and policy enacted to transfer wealth to interest groups most successful in building political power.¹¹ To assess the impact of this blend, one needs to identify where and to what extent the social good or *efficiency* objective has been met, whether this objective is compromised by the power of interest groups, and why the boundary between efficient dimensions and distorted dimensions of deregulation falls where it does. As explained in the introduction to this chapter, “efficiency” refers here to the maximization of the sum of consumer benefits and shareholder profits subject to the regulatory compact allowing shareholders a fair rate of return on invested capital. This objective is met in unregulated competitive markets. While consumer benefits are maximized in competitive markets, however, firms earn only a fair rate of return, nothing more. Efficient regulation mimics this outcome of competitive markets.

We find that the performance of Canadian telephony regulation has

changed markedly in recent years. Historically, Canadian telephony regulation has had a favorable record compared with that of the United States and other countries of the Organization for Economic Cooperation and Development (OECD). Even as recently as 2001–03, telephony prices were relatively low in Canada, despite the high costs imposed by geography (in this rapidly evolving market, these data can be described as historical evidence). As documented in detail in the March 2006 report of the Telecommunications Policy Review Panel, since then, however, the system has been failing to keep up with either the pace of deregulation required for maximum social benefits or the pace established in other countries. Ideas on how to improve telecom regulation can be drawn from a comparative analysis of regulation's performance, structure, and political economy in Canada and the United States. Its lessons will enable Canadian consumers to benefit fully from the enormous improvements in technology for the delivery of telephony services and strengthen the political economy of deregulation.

Until recently, Canadian telecom markets performed well by international standards. According to a study by SeaBoard Consulting Group based on purchasing power exchange rate, Canadian rates for a basic service bundle in the first quarter of 2003 were *less than two-thirds* of U.S. rates for a representative sample of cities.¹² Canadian telephony prices in 2001 (again based on purchasing power exchange rates) were reportedly the tenth lowest among thirty-two OECD countries in the residential sector and sixth lowest in the business sector.¹³ In terms of the overall price level, then, Canadian telecom regulation performed quite well by international standards.

Of course, one must remember that international and U.S. standards are weak. As Andrew Rich notes in chapter 11, U.S. telecom regulatory reform has met only some of its objectives, with wire-line telecom prices in most markets falling but overall consumer spending on telecom services generally increasing. Telecom regulatory reform, in his view, has led to more rather than fewer rules, and the resulting law has hampered rather than helped efforts to build a competitive environment.

These features are characteristic of Canadian telephony markets as well: wire-line telecom prices have not fallen substantially for all services, total consumer spending on telecom services has increased, and the reform of telecom regulation has without question led to more rather than fewer rules. Our perspective on these specific facts is somewhat different, however. First, because the reform of telecom regulation eliminated or substantially reduced cross-subsidies (through "rate rebalancing"), previously subsidized prices (for local service, specifically) would be expected to rise. This is efficient. Second,

an increase in total expenditure is a consequence of overall price decreases in a market where demand is elastic. Third, as discussed shortly, a move toward liberalization of markets requires a transitional period in which there are indeed more rules and more decisionmaking by the regulator.

Rich argues convincingly that U.S. telecom regulatory reform was in some ways designed to stifle competition. Regional Bell operating companies (RBOCs), for example, were not allowed to enter the long-distance market, and when they did gain entry, access was severely limited by a set of stringent requirements. The fault lay largely with the 1996 Telecommunications Act, which failed to set out a workable and firm commitment to the transition to competition in the United States owing to enormous lobbying efforts by the industries affected (“the World Series of lobbying,” according to one news report). As a consequence, the parameters for deregulation were weakened. The Telecom Act, Rich points out, was a very complicated compromise, the details and implementation of which were left up to the Federal Communications Commission (FCC)—but the FCC’s decisions were regularly challenged in the courts by one party or another. As Rich explains, the courts showed little deference to the regulators, with the result that deregulation became a slow, cumbersome, unpredictable, and inefficient process.

Perhaps because of the different political dynamics at play in parliamentary and congressional systems, the transition parameters set by Canada’s Telecommunications Act of 1993 were much less detailed than those adopted in the United States. Their details and implementation were assigned to the Canadian Radio and Telecommunications Commission (CRTC). Where U.S. regulatory decisions are constantly challenged in the courts, however, CRTC decisions seldom face such challenges because of the deference paid to the commission in the courts, and because of the limited conditions for appealing its decisions to the federal cabinet. These challenges, when launched, are rarely successful. Hence the details of implementation of the law’s provisions are essentially regulatory fiat in Canada, in contrast to the treatment in the United States. This makes for a more streamlined, less politicized system, although Canadian regulation has become very cumbersome in many respects, with long delays for the approval of rates (prior approval of rates is required) and intensive micro-managing of decisions by the regulator (for example, some decisions concern which prices should be regulated down to the fifth decimal place and which to the fourth decimal place).

In telecom deregulation, traditional rate-of-return rules were replaced in 1998 by price-cap rules—thereby allowing incumbent telecoms greater freedom in their decisions on service prices and quantities.¹⁴ However, this

switch greatly expanded the complexity and number of regulatory rules and decisions. Under rate-of-return regulation, prices of individual services are set by the regulator, outside the discretion of the regulated firm, at levels that in principle cover total costs, including a fair rate of return on invested capital. Price levels are reset after each rate hearing, which may be as often as every year. With prices matched to changing costs, the regulated firm has little incentive to engage in cost-saving innovation. In addition, this kind of regulation is completely unsuited to a market in which technology is rapidly evolving and more competitors are capable of supplying an increasing percentage of services. Incumbent local exchange carriers (ILECs), now in the second term of price-cap regulation, face four main sets of constraints on prices: ceilings on the index of prices within each of a number of service baskets (currently eight), ceilings on prices of certain individual services, unbundling restrictions and prices at which access to essential and near-essential assets must be offered to competitors, and price floors or imputation tests. The central constraint of price-cap regulation, the ceiling on an index of prices for a basket of services, was initially set at a level that covered costs, with a fair rate of return on invested capital. The allowed price index could then be increased in any year at the realized rate of inflation, I , minus the rate of real cost decrease (as predicted at the outset of the price-cap period), X . Hence the price cap is commonly described as “ I minus X ” regulation.

A second, more significant factor underlying the apparently strong overall price performance of Canadian telecom regulation is the link between initial price-cap levels and rate-of-return regulation. The political economy during rate-of-return regulation, which was quite different from that in the United States, also played an important role. Allowed rates of return in Canada for public utilities were in general substantially less than those in the United States. A key decision by Canada’s National Energy Board in 1994, with an impact on rate-setting across all utilities, set the allowed rate of return on equity for low-risk utilities at three percentage points above long-term government interest rates—a risk premium below the risk premiums implicit in U.S. utility rate setting. In the framework of Sam Peltzman’s political economy theory of regulation, where the regulator’s objective function is a weighted average of firm profits and consumer welfare, Canadian regulators were somewhat more consumer oriented.¹⁵ With the initial allowed price-cap parameters grounded in rate-of-return regulation, Canadian telephony prices were lower.

Although the overall cost of service is a prime consideration in assessing efficiency, *relative* prices need to be examined as well. Efficient relative prices

reflect differences in the marginal costs of providing services and are free of cross-subsidies.¹⁶ Before deregulation, telecom prices incorporated three cross-subsidies: local service was subsidized by excessive long-distance prices; residential rates were subsidized by business rates, and high-cost, rural service zones were subsidized in each province by low-cost rates through the established system of “postage stamp pricing.” That is, consumers had universal access to telephone service at a common price irrespective of cost differences. An essential step in the transition toward competition has been to eliminate or vastly reduce two of these cross-subsidies, from long-distance and business rates. The tremendous decline in long-distance rates resulting from the *rebalancing* of rates and improvement in the costs of service delivery is the single most obvious change in telephony since the start of deregulation. But the subsidization of rural rates through postage stamp pricing continues.

The political economy questions are clear. Why is this subsidization so entrenched when it has been feasible to remove other roadblocks to competitive pricing? After all, eliminating subsidies to local exchange service has imposed huge costs on local exchange consumers, and price rationalization elsewhere (in electricity markets) has been strongly resisted in the deregulation forum. The critical issue here is which force will win in the battle of efficiency—the maximization of total social benefits versus private interest group politics.

Subsidies to high-cost rural service survived the move to efficiency for the same reason that enormous agricultural subsidies persist in virtually every developed economy. The benefits of these subsidies are concentrated among a small population, rural residents, whereas their costs are spread out across a large population. In telephony markets, consumers within the highest cost-rate bands are a small proportion of total consumers. In addition, rural voters are overrepresented. In the U.S. political system, this is because senators are allocated by state rather than by population, and in Canada it is because federal and provincial ridings are geographically defined. Politicians would lose rural votes if the subsidies were removed but would not gain significant urban votes since the subsidy would not be a significant political issue for any individual urban dweller. Subsidies to rural residents of many different kinds survive (including postage stamp pricing for other public utility services and for, well, postage stamps).

Why did the subsidy to local service rates *not* survive? The answer to this question is more subtle. When the CRTC held hearings on the “affordability” of higher local service rates, the negative impact of the removal of the subsidies on poorer consumers in particular was a significant concern. In

traditional, full-rationality-based political economies in which consumers are assumed to be *fully aware* of the impact of any economic policy, the general trend toward lower rates driven by the strong and steady improvement in technology would be irrelevant: the subsidy's costs and benefits to individual citizens would not be substantially affected by the general downward trend in costs, and the outcome of lobbying efforts and simply political influence would remain the same. The successful elimination of the inefficient cross-subsidy is likely due to a combination of two factors that are not incorporated in the traditional political economy of government policy. First, as psychologists Daniel Kahneman and Amos Tversky have convincingly demonstrated, individuals tend to assess welfare in relation to the status quo and are highly averse to losses by this measure.¹⁷ In the conventional theory of rational decisionmaking, the status quo does not play a special role in the evaluation of losses and gains. In the deregulation context, the loss from not gaining fully from the general decrease in telephony pricing is less important to individuals than a loss they might incur in relation to the level of welfare (or pricing) before the change in telecom regulation. A second and related factor is that individuals are simply less likely to keep track of, or be aware of, "what could have been" rather than losses that are actually incurred. If local exchange prices do not rise greatly, the fact that these prices would have fallen even more had the subsidy been maintained is less relevant politically because consumers and voters are less likely even to be aware of the fact.

As the foregoing discussion demonstrates, the relatively strong historical performance of Canadian telecom regulation and its consumer benefits can be traced to price-ceiling constraints, including price caps, and the more consumer-oriented regulation in Canada during the period of rate-of-return regulation for public utilities. A second set of price constraints in Canada's telecom market performed less well. These constraints consist of price *floors*, also called imputation tests because price levels are justified through the imputation of costs, including shares of joint costs. The most contentious of price floor constraints in Canada are imposed on ILEC offerings in the emerging voice over Internet protocol (VoIP) service market.

VoIP service is the closest substitute to local exchange service that has emerged in the telecom market, but it does not rely on ILEC assets (not even a phone line). The service operates over the Internet and from the customer's perspective is virtually identical to land-line service. In the United States and almost all other countries, the rates on VoIP service by any supplier are unregulated. In Canada, the CRTC imposed a price floor on any VoIP offering by an ILEC, but competitors have been free to set any price that they wish.

Regulated price floors are rarely in the interest of consumers, who prefer low prices to high prices. Why has the CRTC imposed this restraint? The purpose was to ensure that “the incumbent local exchange carriers—those with market power—cannot price their local VoIP services below cost to stifle competition.”¹⁸ The CRTC’s justification, in other words, is that a more competitive (unconcentrated) market structure can be obtained when the lowest-cost suppliers are constrained against pricing too low.

This argument confuses a competitive market structure as an end in itself with a competitive structure as a *means* to achieving lower prices. It is low prices that matter to consumers. The commission believes that ILECs have the incentive to price below cost in order to protect their dominance in the market, and that this dominance works against the social interest. As a matter of economics, there is only one theory under which dominant firms have an inefficient and anticompetitive incentive to price below cost: predatory pricing. If for some reason entry into a market is temporary, or potential entrants are so intimidated by a low incumbent price response to entry that they would never again attempt entry, then an incumbent firm can rationally price below cost as a means of investment in the opportunity to raise prices well above competitive levels once potential entry has disappeared. The necessary conditions for this incentive are very rarely met as a matter of economics. There is not even a remote chance that the conditions are met in the market for VoIP service. This market already has dozens of suppliers in Canada, the costs of entry are very low, and any of the more than 1,100 suppliers worldwide could enter if incumbents attempted to raise prices above competitive levels in the future. In short, low VoIP prices by incumbents can only be viewed as a competitive response by ILECs—not an anticompetitive practice. Low prices are in consumers’ interests. Fortunately, the CRTC’s decision to regulate incumbents’ VoIP prices has recently been reversed by Cabinet Order.

This is not the only decision on which the CRTC has erred by confusing low prices with suppression of competition. In regulating the ability of incumbent telcoms to offer promotions, for example, the commission prohibits promotions longer than six months on the basis that “promotions of too long a duration become perceived by consumers as being standard offers, thus compelling competitors in the market to react by changing their own standard offers.”¹⁹ This, of course, begs the question of why the compulsion to respond with lower prices should be regarded as *anticompetitive*. Protecting competitors is not equivalent to protecting competition.

The CRTC’s regulatory restrictions on pricing have gone beyond addressing concerns that prices are too high or (the more recent focus) too low to visiting

the issue of price discrimination. The CRTC has frequently acted to limit variable pricing in telecom, in part in keeping with its statutory mandate to ensure that there is no unjust discrimination in relation to the provision of this service. But price discrimination is ubiquitous in the industrialized world: for example, airlines charge different fares for leisure and business travelers, and cinemas charge different ticket prices for old or young patrons. Where price discrimination increases the output of an industry, as it often does, this tends to be welfare enhancing and permits firms to recover fixed costs by charging higher prices to less elastic demanders than prices charged to more elastic demanders (which may be related much more closely to the marginal costs of serving the latter and which ensures that they will be served).²⁰

Despite the conventional view in competition policy thinking and law that price discrimination is rarely problematic, which would apply equally well to telecom, the CRTC has acted vigorously to eliminate variable prices as a form of unjust price discrimination. From the perspective of competition policy or total economic welfare, discounts to subsets of customers through win-backs or promotions that are not available to other customers within the same class, or geographic price discrimination whereby incumbent carriers reduce rates on services in regions where they face competition but do not reduce rates on the same class of services in regions where they do not face competition, are benign. CRTC restrictions of this nature represent, once more, excessive intervention in the telecom marketplace.

In sum, CRTC policies on price floors are a misguided attempt to make telephony markets more competitive because they confuse the concept of a competitive market structure as a means to greater market efficiency and competitive market structure as an end in itself. These missteps on CRTC's part are related to the emergence of competitive suppliers as an interest group in itself. Having perhaps even more limited expertise than the FCC in the United States, the CRTC relies largely on companies, and some consumer groups, to provide evidence on and analysis of regulatory solutions that its staff assesses, rather than proactively engaging in substantial research itself. As a result, perhaps inevitably, the regulator is forced to balance the interests of three groups: consumers, ILECs, and competitive suppliers. In the case of price floors, the interest of competitors is directly opposed to that of consumers, not to mention total social welfare. This contrasts with the useful role private competitors can play in politically resisting reregulation of maximum prices, as discussed earlier with respect to electricity. Efficient regulation does not balance the interests of the various parties affected; it maximizes consumer welfare subject to the constraints that the regulatory compact imposes

on incumbent monopolists. Competition ensures that firms will earn fair returns without requiring regulation to be biased in their favor.

Airlines

The early history of Canadian aviation is one of government participation in almost every conceivable way. From the 1930s on, the Canadian government regulated airline practices extensively, setting fares and service conditions, such as frequency of service and size of airplane, approving entry by new airlines only if there was an unambiguous need for the entrant's services, which the government rarely found, and requiring federal approval for participation on any given route.²¹ The government also owned and operated all the airports in the country, as well as the air traffic control system. The government even owned the dominant carrier, Air Canada.²²

Deregulation began in the early 1980s and made its real impact on Canadian aviation with the passage of the National Transportation Act in 1987, signed into law in 1988. Entry was substantially deregulated: potential entrants only needed to meet a "fit, willing, and able" standard, requiring insurance coverage, certified aircraft and pilots, and 75 percent Canadian ownership.²³ Exit restrictions were eased as well: airlines were only required to give 120 days' notice of their intention to abandon a route. Fare levels and conditions of service were completely deregulated in southern Canada, while regulation was eased but did not disappear in the north, where the government continued to oversee fares, exit, and entry until 1996. Another important liberalizing step was taken in 1988 when Air Canada was privatized.

By contrast, steps to liberalize the market to foreign competitors have been tentative at best. Apart from the "Open Skies" agreement signed with the United States in 1995, which permits Canadian and U.S. airlines to compete over routes between the countries, strict barriers to foreign participation remain. Foreigners cannot own more than 25 percent of any Canadian airline, thus eliminating the prospect of a foreign carrier buying or otherwise establishing a Canadian airline and competing with Air Canada. Moreover, foreign carriers are restricted from carrying passengers point to point within Canada (cabotage).

Just as in the United States, where allegations of predatory pricing in airlines have become common (see chapters 10 and 12), Canada has begun focusing regulatory attention on competitive conditions in the industry. Air Canada acquired Canadian Airlines in December 1999 and emerged as a clearly dominant firm in 2002, with a domestic market share of about

73 percent by seat kilometer and 64 percent by seat.²⁴ This dominance created concerns about Air Canada's conduct. Whereas allegations of predatory pricing have failed to stick in the United States, most prominently in the case of American Airlines, there has been success in advancing this argument in Canada.²⁵ But rather than litigating predation in the courts or before the Competition Tribunal under standard predatory pricing provisions, the Canadian approach has been to address airline pricing practices through legislation. Bill C-26 passed in 1996 reimposed a form of regulation on the airline industry, particularly Air Canada. For example, Bill C-26 empowers the Canadian Transportation Agency to review prices on monopoly routes and to disallow and roll back any "unreasonable" fares.²⁶ To ensure that Air Canada did not set prices too low, however, the government also created special provisions in the Competition Act empowering the Competition Bureau (under s. 104.1) to issue temporary cease and desist orders in the face of alleged predation by a dominant airline without prior review by the Competition Tribunal. The bureau also has the power to impose administrative monetary penalties of up to Can\$15 million on any airline that has abused its dominant position. In the airline industry, as in telephony, the government has been concerned about low pricing, particularly selective price cuts by incumbent firms designed to match competitors' prices on some routes. Recently, however, the government has proposed changing course by eliminating all airline-specific provisions in the Competition Act.

Aside from regulating the airlines themselves, the state has participated extensively in the airport business. Canada has 726 airports, 24 of which hold "national" status, in that they account for 90 percent of all scheduled passenger and air cargo traffic.²⁷ The federal government originally owned and operated the airports, but pursuant to a recent privatization scheme, airports are now operated by nonprofit corporations whose boards of directors include municipal government nominees that lease airport facilities from the government. Increased direct oversight of airports, including price regulation, is contemplated in the recently proposed Canada Airports Act. In addition, the state operates the air traffic control system. The Canadian government recently relinquished direct control of air traffic to Nav Canada, which is a nonprofit corporation with representatives on its board from a variety of stakeholders, including airlines and labor unions.

Deregulation has clearly had a significant, favorable impact on the airline industry.²⁸ Since deregulation, and particularly in recent years, there has been a proliferation of low-fare, low-amenity service. WestJet has been the most successful provider of low-fare service, increasing its market share as measured

by seat kilometer from 4 percent to 14 percent between 1999 and 2002.²⁹ In total, low-fare service reached 36 percent of the market by 2002.³⁰ As a recent newspaper account put it, discount airlines have “pretty well blanketed” Canada with discount flights and are increasingly entering cross-border routes.³¹

Airline deregulation in Canada has had some other effects as well: prices for air traffic control and airport services, such as landing and parking fees, have increased since the privatization of Nav Canada and airports. Nav Canada’s fees doubled between 1997 and 1998.³² Revenue at the eight largest airports increased by 9.7 percent in 2001, even while the total number of passengers did not change.³³ The Canada Transportation Act Review Panel expressed concern that the airports were exercising monopoly power in setting prices.³⁴

In the case of airport performance, the problems stem from a *lack* of regulation. Airports, because of their geographical locations and costs, are often essential facilities. In such circumstances, the market will not generate competitive prices, and price regulation is more appropriate. In their laudable push to deregulate airlines, policymakers have neglected to regulate the natural monopoly elements that remain.

In other respects, the opposite is true: there remains too much regulation in airlines, though recent government proposals are paying some attention to this issue. Following the merger of Canadian Airlines and Air Canada, the federal government was reluctant to let competition run its course, relying instead on extremely interventionist predatory pricing policies, under which a near-bankrupt airline was assumed to be a dominant predator when it simply matched its competitors’ prices. Just as in the telephony industry, where federal authorities restricted price-matching by incumbents, they opted for a dubious policy of keeping prices high in the short run through the threat of predatory pricing laws in order to keep prices competitive in the longer run. This is misguided policy. Matching prices is the essence of competition, and authorities should generally resist the temptation to assume that they can accurately determine when a matched price is predatory. It is encouraging that the minister of industry recently proposed repealing the airline-specific provisions in the Competition Act, although the law was never passed owing to a subsequent federal election. Relying on conventional approaches to predation in airlines, as is done in the United States, rather than adopting specific provisions in the Competition Act, would leave a near-bankrupt airline less susceptible to findings of predation.

At the same time, it is discouraging that the federal government has neglected to deregulate in an obvious way to address concerns about Air

Canada's possible dominance: that is, by opening the borders to foreign competition. Both the remaining restrictions on foreign competition and the (current) regulation of airline prices through predatory pricing law represent cases of the government doing too much, not too little.

What lessons can be drawn from the deregulatory experience in airlines? First, deregulation is not an either/or proposition. Policymakers should examine an industry to determine which sectors present natural monopoly problems and which do not. Deregulating airports was not sensible, whereas deregulating airlines was. Second, political considerations can dominate the deregulatory agenda. The political fallout from the merger of Air Canada and Canadian Airlines combined with the failure of some small airlines put political pressure on the federal government to appear to be doing something. The course of action it chose, predatory pricing reform, certainly appeased small rivals and avoided a costly course, truly open skies, for Air Canada and its rivals alike. However, this action was not in the public interest, but rather in the collective interest of the domestic airlines. As in the VoIP case, where the emergence of rival telecommunications firms created political pressure to protect competitors rather than competition, the pressure of rival airlines surely affected the government's decision to adopt the airline-specific predatory pricing regime.³⁵

The reasons for the Canadian approach to airline predation become clearer when one examines Canadian competition law alongside U.S. law. In chapter 10, Michael Levine suggests that the fracturing of the U.S. industry created obstacles to antitrust reform, whereas in Canada, Air Canada was the clear focal point that motivated reform. The structure of antitrust law in the two jurisdictions undoubtedly contributed to the different outcomes. U.S. antitrust law relies on very general provisions that set out standards for the courts to apply in adjudicating antitrust disputes. Though Canadian competition law relies on standards to a considerable extent, of course, it relies more heavily on specific statutory provisions regarding various potentially anti-competitive practices. Since amending the Competition Act to include airline-specific provisions was not a difficult matter, it was more feasible for political actors to press for such a change. In contrast, the Sherman Act has had the same general approach to monopolization since 1890; lobbying for a legislative amendment to it (or the more recent but still general Robinson-Patman Act) would not have seemed as plausible a strategy as in Canada. As a consequence, predatory pricing policy in airlines has remained a matter for the courts in the United States, where rent-seeking lobbying is presumably less influential, whereas it became a legislative matter in Canada. With the

greater potential influence of competitors in Canada, it is perhaps not surprising that predatory pricing claims have been more successful there than in the United States.

Appropriate deregulatory regimes are ones that commit the government to a sensible course of action even in the face of political fallout from future events. For example, if the government had been insulated from the influence of local political actors, such as competitors, it might have resisted the push for specific predatory pricing laws for airlines.³⁶ When embarking on privatization and deregulation, the government could have entered into an international agreement that skies would be inexorably opened over time to foreign competition. An international agreement to this effect would have benefited Canada not only by promoting competition but also by deterring the government from adopting politically motivated regulation in the future, such as the airlines' current predatory pricing rules.

Conclusions

Two kinds of considerations should influence the design of the deregulatory agenda. The first is economic. The desire for greater economic efficiency has undoubtedly inspired the path of deregulation. The second is political. In our view, political considerations have not received sufficient attention in the deregulation of markets, and this failing has in turn jeopardized the economic benefits of deregulation. Future attempts at deregulation must do better in anticipating potential political obstacles to reform, even at the cost of departing from "first-best" options, in order to keep the deregulation train on track. Put another way, policymakers should view deregulation as an exercise in maximizing social wealth subject to political constraints.

Managing the transition from regulation to the market in network industries such as electricity, telecommunications, and airlines is a complex task. Although liberalization offers clear economic gains, the optimal mix of regulation and free markets is not obvious. This makes it all the more important to anticipate political resistance to deregulation and design the boundaries of market and regulation with such political realities in mind. Choosing a less-than-perfect approach that allows the government to commit to deregulation is preferable to establishing a technically optimal but politically infeasible regime.

In the introduction to this volume, Marc Landy and Martin Levin compare the "old politics" of entrenched interest group dynamics with the "new politics" of ideas or philosophies that transcend special interests. We view

deregulation as a blend of the old and the new politics. Canadian telecom regulation, for example, has in some respects been less vulnerable to the distortions of interest groups than its counterpart in the United States, but in other respects it has been more vulnerable, to the detriment of consumers and social welfare. At a theoretical level, all evidence suggests that even the traditional theory of the political economy of regulation, with its assumption of full rationality, needs to be revisited.³⁷ As the evidence on the deregulation experience suggests, two ideas, well-known to behavioral economists and psychologists, play a critical role in political economy, the first of which is that the status quo—status quo prices, in particular—play an essential role.³⁸ Thus in an industry such as telephony, it is possible to move toward efficiency and away from the distortions of cross-subsidies because rapidly evolving technology protects harmed groups from experiencing price increases over time. (The harmed groups are relatively insensitive to the fact that prices would be even lower had the subsidies been maintained.) In electricity, the status quo bias means that current prices act as a rigid benchmark from which any upward movement is politically very challenging, whatever its efficiency or distributional impacts. Second, distortions in electricity pricing hinge not on the relative powers of competing interest groups, the traditional source of price distortions, but on a failure of voting consumers to understand the tradeoff between greater efficiency (including lower government deficits) and lower current energy prices. The latter are immediate, more concrete, and more easily grasped by consumers. The political economy of regulation must, in short, be sensitive to the themes of behavioral economics.

Patterns of deregulation in the United States and elsewhere around the world in recent years have been attributed to many factors:³⁹ changes in ideology concerning the relationship between state and market; changes in politically salient interests; changes in technology, which introduce new participants or potential participants on the supply side of various markets and stimulate new configurations of customers on the demand side; new ideas about alternative welfare-maximizing policies; new institutional arrangements that influence what interests and ideas are privileged in particular policy domains or marginalized in subsequent public policy decisions; and the internationalization of markets that induce countries to follow liberalization policies implemented elsewhere so as not to lose international competitiveness on either the import or export sides.

With respect to the three sectors discussed in this chapter, technological change seems of little significance in the airline industry, of somewhat more but still limited significance in the electricity sector, and of central significance

in the telecommunications sector. Internationalization of markets, in Canada's case, has been an influential factor in the deregulation of airlines and telecommunications. Ideology seems to have played a minor role, with the partial exception of electricity restructuring in Ontario. Ideas in conjunction with new institutional arrangements seem to have been an important factor in electricity restructuring. But in the end, standard public choice explanations of existing policy configurations do not provide adequate account of the sorts of forces that disrupt existing political equilibria and lead over time (often relatively short periods of time) to nonincremental policy changes.

Notes

1. Michael Trebilcock and Ron Daniels, "Electricity Restructuring: The Ontario Experience," *Canadian Business Law Journal* 22, no. 2 (2000): 163; Tom Adams, *From Promise to Crisis: Lessons for Atlantic Canada from Ontario's Electricity Liberalisation* (Halifax, N.S.: Atlantic Institute for Market Studies, November 2000), p. 9.

2. Ontario Electricity Financial Corporation, *Annual Report 2004* (Toronto).

3. Ontario, Ministry of Energy, Science and Technology, *Direction for Change: Charting a Course of Competitive Electricity and Jobs in Ontario* (Toronto: Queen's Printer Ontario, November 1997).

4. Electricity Act, 1998, S.O. 1998, c. 15, Sch. A.

5. Trebilcock and Daniels, "Electricity Restructuring," p. 170.

6. *Ibid.*, p. 171.

7. Electricity Pricing, Conservation and Supply Act, 2002, S.O. 2002, c. 23.

8. For a critique of this plan, see Ahmad Faruqui and Stephen George, "Preventing Electrical Shocks: What Ontario and Other Provinces Should Learn about Smart Metering," *Commentary* 210 (Toronto: C. D. Howe Institute, April 2005).

9. Terry Daniel, Joseph Doucet, and Andre Plourde, "Electricity Industry Restructuring: The Alberta Experience," Working Paper (University of Alberta, School of Business, May 2001).

10. See Richard Pierce, Michael Trebilcock, and Evan Thomas, "Beyond Gridlock: The Case for Greater Integration of Regional Electricity Markets," *Commentary* 228 (Toronto: C. D. Howe Institute, March 2006).

11. Marc K. Landy and Martin A. Levin, eds., *The New Politics of Public Policy* (Johns Hopkins University Press, 1995); also Andrew Rich, chapter 11 in this volume.

12. SeaBoard Group, *Communications Pricing for Consumers: A Cross-National Survey* (www.seaboardgroup.com [May 2003]). The Canadian cities were Toronto, Winnipeg, Regina, Lethbridge, and Cornerbrook. The American cities were Chicago, Pasadena, Augusta, Tuscaloosa, Boston, Seattle, and Boise. This study's conclusion that Canadian rates were less than two-thirds of U.S. rates was identical whether the services priced were a basic basket of local and (some) long-distance services or a basket with more long-distance services and many options.

13. See OECD, *Regulatory Reform in Canada: Regulatory Reform in the Telecommunications Industry* (2002). In the OECD data, the prices of Canadian and U.S. services are much closer than more recent SeaBoard data suggest. See SeaBoard Group, *Communications Pricing for Consumers*.

14. "Price Cap Regulation and Related Issues," CRTC Decision 97-9 (May 1, 1997).

15. Sam Peltzman, "Toward a More General Theory of Regulation," *Journal of Law and Economics* 19 (August 1976): 211–40.

16. Since joint fixed costs must be covered, efficient relative prices will also reflect differences in elasticities of demand, from the theory of Ramsey pricing.

17. Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decisions under Risk," *Econometrica* 47 (March 1979): 313–27.

18. CRTC Telecom Decision, May 12, 2005.

19. CRTC 2005-25, par. 66.

20. See Michael Trebilcock and others, *The Law and Economics of Canadian Competition Policy* (University of Toronto Press, 2003), pp. 339–57.

21. See David Gillen, *The Future of Canada's Airline Industry: Frills, No-frills or Walmart*, draft manuscript (Calgary: Van Horne Institute, 2001), p. 20.

22. *Ibid.* p. 1. See also p. 12, where Gillen suggests that public ownership of Air Canada was probably more influential than regulation in shaping commercial aviation in Canada. In their study of the impact of regulation on airline performance around the world, Gonenc and Nicoletti rely on state ownership of airlines as an indicator of the degree of regulation in that country. Rauf Gonenc and Giuseppe Nicoletti, "Regulation, Market Structure and Performance in Air Passenger Transportation," *OECD Economic Studies* 32, no. 183 (2001).

23. *Ibid.*, p. 25.

24. Debra Ward, independent transition observer on airline restructuring, *Airline Restructuring in Canada: Final Report* (Ottawa, September 2002), p. 76.

25. *United States v. AMR Corp.*, 335 F.3d 1109 (10th Cir. 2003), *aff'g* 140 F. Supp. 2d 1141 (D. Kan. 2001).

26. Canada Transportation Act Review Panel, *Vision and Balance* (Ottawa, June 2001), recommended the elimination of this provision (www.reviewcta-examenlrc.gc.ca/english/pages/finalreport.htm).

27. Gillen, *The Future of Canada's Airline Industry*, p. 144.

28. For example, Lazar reports that fares—net of taxes, airport fees, and Nav Canada fees—have fallen since Air Canada acquired Canadian Airlines in 1999, likely because of the growth of discount airlines: Fred Lazar, *Turbulence in the Skies: Options for Making Canadian Airline Travel More Competitive*, Commentary 181 (Toronto: C. D. Howe Institute, April 2003).

29. Ward, *Airline Restructuring in Canada*, p. 76.

30. *Ibid.*, p. 21.

31. Brent Jang, "West Jet Spreads Wings Further with Launch of Flights to U.S.," *Toronto Globe and Mail*, September 20, 2004, p. B4.

32. Gillen, *The Future of Canada's Airline Industry*, p. 43.

33. Lazar, *Turbulence in the Skies*, p. 7.

34. Canada Transportation Act Review Panel, *Vision and Balance*, p. 152.

35. See Edward Iacobucci, "Public Choice Theory and Recent Developments in Canadian Competition Policy" in *Selected Topics in Corporate Litigation*, Annual Business Law Symposium (Kingston, Ont.: Queen's University, 2000–01).

36. On the importance of reconfiguring political constituencies to preserve economic reforms, see Eric Patashnik's discussion in chapter 12 of this volume. While privatizing creates a constituency that would oppose inefficient reregulation of maximum prices as discussed in respect of electricity, private actors might also lobby for explicit or implicit price floors which will often be inefficient.

37. Peltzman, "Toward a More General Theory of Regulation."

38. Kahneman and Tversky, "Prospect Theory."

39. Michael Trebilcock, "Journeys across the Divides," in *The Origins of Law and Economics: Essays by the Founding Fathers*, edited by Francesco Parisi and Charles K. Rowley (Cheltenham, U.K.: Edward Elgar, 2005).