



OECD Economics Department Working Papers No. 421

**Product Market Competition  
and Economic Performance  
in Canada**

**Maria Maher,  
Jay C. Shaffer**

<https://dx.doi.org/10.1787/553075711023>

**Unclassified**

**ECO/WKP(2005)8**



Organisation de Coopération et de Développement Economiques  
Organisation for Economic Co-operation and Development

**30-Mar-2005**

**English - Or. English**

**ECONOMICS DEPARTMENT**

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IN CANADA**

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**By**  
**Maria Maher and Jay Shaffer**

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## ABSTRACT/RÉSUMÉ

### **Product market competition and economic performance in Canada**

This paper examines the strength of product market competition and economic performance in Canada and discusses way in which the institutional framework governing competition policy could be improved. Competitive forces are comparatively strong and administrative and economic regulations inhibiting competition are amongst the lowest in the OECD countries. However, Canada's regulated conduct doctrine exempts anti-competitive behaviour when required by regulation, and thus significant parts of the economy remain shielded from the competition law. This is a particular problem with provincial government regulation. Restrictions on internal trade also continue to exist, and implementation of the Agreement on Internal Trade is less effective than it could be. More attention needs to be focussed on removing those regulations that restrain competition, particularly in professional services. In network industries, competition has largely been absent in the electricity sector. While it is widely recognised that reforms are necessary, those undertaken in the past have mainly been aimed at bringing in private-sector investment, while avoiding full competition in generation and in retail markets. Canada has more significant restrictions on foreign ownership than almost any other OECD country, notably in airlines, telecommunications and broadcasting, and their removal could improve performance in these sectors.

*JEL classification:* K21, K23, L11, L16, L40, L43, O51

*Keywords:* Canada, market structure, competition, productivity and growth, antitrust law, regulatory policies, network industries

\* \* \*

### **Concurrence sur les marchés de produits et performance économique au Canada**

Ce document examine la puissance de la concurrence dans les marchés de produits et de la performance économique au Canada. Il envisage aussi les moyens par lesquels pourrait être amélioré le cadre institutionnel qui gouverne les politiques de la concurrence. La vigueur des forces concurrentielles est comparativement élevée au Canada et les réglementations inhibant la concurrence sont parmi les plus faibles de la zone de l'OCDE. Cependant, le code canadien de conduite réglementé exonère les comportements anticoncurrentiels lorsqu'ils sont couverts par une réglementation, de sorte que certains pans importants de l'économie restent non couverts par le droit de la concurrence. Ce problème est particulièrement aigu dans le cas des réglementations sous autorités provinciales. Des restrictions continuent de limiter les échanges provinciaux, et la mise en œuvre de l'Accord sur le commerce intérieur est moins effective qu'elle pourrait l'être. Il conviendrait de chercher plus activement à supprimer les réglementations qui freinent la concurrence dans les professions libérales. Dans les industries de réseaux, la concurrence a été pratiquement absente dans le secteur de l'électricité. S'il existe un large consensus sur la nécessité de réformes, celles qui ont été entreprises par le passé ont eu pour objectif principal d'encourager l'investissement du secteur privé, tout en évitant l'ouverture intégrale à la concurrence de secteurs comme la production d'électricité et la vente au détail. Le Canada connaît aussi un plus grand nombre de restrictions significatives concernant les intérêts étrangers que presque tous les autres pays de l'OCDE, notamment dans les domaines du transport aérien, des télécommunications et de la télédiffusion. Leur élimination pourrait stimuler les performances dans ces secteurs.

*Classification JEL :* K21, K23, L11, L16, L40, L43, O51

*Mots clés :* Canada, structure de marché, concurrence, productivité et croissance, loi anti-trusts, politiques de régulation, industries de réseau

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# **Product market competition and economic performance in Canada**

by

**Maria Maher and Jay Shaffer<sup>1</sup>**

## **Introduction**

There is a well identified empirical connection between the intensity of competition in product markets and better productivity performance (OECD, 2002*a*). In general, economy-wide competitive pressures appear to be relatively strong in Canada, with the exception of restrictions on inward foreign direct investment. Administrative burdens on firms and economic regulation inhibiting competition are also comparatively low. Proposed changes in competition legislation, along with in-depth market investigations, should help to ensure that markets are competitive. In general, competition appears to be strongest in the manufacturing sector; industry concentration and mark-ups are relatively low, and the sector faces vigorous competition from abroad, reflecting Canada's open economy. However, in some non-manufacturing network sectors Canada has experienced relatively weak labour productivity growth since the early 1990s, and a large part of this may be due to weak competitive forces. Over the past decade it has fallen behind a number of other OECD countries that have introduced reforms aimed at intensifying competition in these sectors. This is particularly the case in electricity, where the market in most provinces is supplied by vertically integrated government-owned monopolies. Market power on the part of incumbent firms also remains a concern in other sectors, particularly in airlines.

This paper assesses what role product market competition and the policies that impact upon competition may have played in the performance of the Canadian economy over the past decade. The main links between stronger competition and macroeconomic performance are reviewed in the first section of this paper while the second section describes the competition legislation framework and recent proposed changes to it. The third section discusses regulatory policies impacting upon competitive conditions in the economy, in particular restrictions on foreign direct investment and inter-provincial trade. Regulation, the intensity of competitive forces and recent reforms are then analysed for a wide range of non-manufacturing network sectors: telecommunications, broadcasting, electricity, natural gas and airlines. A concluding

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1. This paper was originally prepared for the *OECD Economic Survey of Canada 2004*, which was published under the authority of the OECD's Economic and Development Review Committee. Maria Maher is a senior economist in the Economics Department and Jay Shaffer is a consultant lawyer in the Competition Division in the Directorate for Financial and Enterprise Affairs. The authors would like to thank Mike Feiner, Andrew Dean, Peter Jarret, Giuseppe Nicoletti, Deborah Roseveare and Annabelle Mourougane for valuable comments. Special thanks to Raoul Doquin for statistical assistance and Mee-Lan Frank for her technical assistance.

section draws on the analysis to recommend policies that could further improve product market competition and boost economic performance.

### **Macroeconomic performance and indicators of competition**

Canada has witnessed relatively good economic performance over the past decade at the aggregate level. Average GDP growth between 1991 and 2003 was above both the EU and OECD averages and higher than in any other G7 country with the exception of the United States (Table 1). The robust GDP growth performance can be explained by both comparatively strong labour productivity growth (per worker) and sizeable employment gains, unlike many other OECD countries, where GDP growth has been driven mainly by one or the other. The level of GDP *per capita* in 2002 was also above both the EU and OECD averages, and higher than in most other G7 countries with the exception of the United States, with which a productivity gap of 15 percentage points remains. While productivity growth over the last decade is encouraging, it still lags that of the United States. In order to close its productivity gap *vis-à-vis* the United States (and better performing EU countries), productivity growth will need to improve still further.

A sectoral breakdown of labour productivity growth shows that there is scope for improvement in several areas. Performance in manufacturing and construction has been relatively good compared with other OECD countries. And productivity growth in wholesale and retail trade was also higher than in most other major countries, thanks in part to the entry of Wal-Mart. Reforms to introduce competition in telecommunications were undertaken relatively early compared to most other countries. Although productivity gains in the sector have been weaker than in countries where reforms have been more recent, performance has been comparable with that of other early reformers such as the United States and the United Kingdom. One sector that stands out as having poor productivity growth over the 1990s is the electricity, gas and water supply sector. Canada's productivity gains in this sector, while comparable to those of the United States, have been considerably less than in other countries where average annual productivity growth has been three to five times greater. While increases in the transport and storage sectors have been comparable with those of other G7 countries, a number of smaller countries have had considerably better results, indicating that there is also room for improvement here.

### ***Indicators of the intensity of product market competition***

Focusing on regulations that restrict competition and market mechanisms (*e.g.* economic and administrative regulations and barriers to trade and foreign direct investment), OECD indicators of regulation suggest that in 1998 the economy-wide regulatory stance of Canada was around average compared with other OECD countries (Figure 1).<sup>2</sup> While Canada had a comparatively low degree of economic and administrative regulation, restrictions on foreign direct investment (FDI) account for its average stance. Indeed, Canada had the second greatest restrictions on FDI in the OECD.<sup>3</sup> In addition to Canada's relatively average economy-wide regulatory stance, its rating in important service sectors was also average (*i.e.* the utilities and transport sectors) (Figure 2). Reforms in these sectors over the past two decades have not been as far-reaching as in other countries. While at the end of the 1970s Canada had one of the most favourable regulatory stances to competition amongst OECD countries, by the end of the 1990s it lagged behind in the electricity, gas and transport sectors.

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2. A limitation for current cross-country comparisons is that the data in Figure 1 stop in 1998. The OECD is now in the process of updating these indicators.

3. Canada may be more forthcoming than some other countries in self-reporting its restrictions, and if so, this could affect its ranking (Golub, 2003).

Table 1. Output, employment and productivity  
Average annual percentage change  
1991-2003

	Canada	United States	Japan	Germany	France	United Kingdom	Italy	Australia	New Zealand	Denmark	Norway	Sweden	EU-15	OECD
Average GDP growth of which:	<b>2.8</b>	3.0	1.3	2.3	1.7	2.3	1.4	3.4	2.9	2.0	3.2	1.9	1.9	2.5
Productivity (per employed person)	<b>1.3</b>	1.8	1.2	0.5	1.1	1.9	1.1	1.9	0.9	1.9	2.3	2.3	0.9	1.1
Employment	<b>1.4</b>	1.1	0.1	1.8	0.6	0.4	0.3	1.5	2.0	0.2	0.9	-0.4	0.9	1.4
Labour productivity growth in selected industries <sup>1</sup>														
Total manufacturing	<b>3.1</b>	3.6	2.6	2.4	3.5	2.9	2.0	2.4	2.3	2.7	1.0	6.3	..	..
Electricity, gas and water supply	<b>1.0</b>	1.1	2.2	5.4	2.6	8.3	3.7	5.8	7.4	4.3	3.8	2.2	..	..
Construction	<b>0.6</b>	0.2	-3.0	0.0	-0.1	2.1	-0.1	0.8	0.6	0.6	0.7	0.7	..	..
Wholesale, retail trade <sup>2</sup>	<b>2.6</b>	3.9	1.5	0.3	1.0	2.0	1.5	2.9	1.6	2.2	5.7	3.2	..	..
Post and telecommunications <sup>3</sup>	<b>3.2</b>	4.3	1.6	13.0	4.7	4.4	9.5	7.2	6.1	6.2	11.2	7.2	..	..
Transport and storage <sup>4</sup>	<b>1.8</b>	1.3	..	3.8	1.6	..	1.5	3.5	..	3.0	2.2	2.4	..	..
Memorandum items:														
GDP per capita <sup>5</sup>	<b>84.0</b>	100.0	74.2	71.5	75.5	77.3	70.8	77.6	61.8	80.8	98.2	75.4	66.4	69.6
GDP per hour worked <sup>5</sup>	<b>85.2</b>	100.0	70.5	92.5	113.2	79.3	93.7	78.4	62.9	93.5	125.5	85.6	81.6	76.3

1. 1991-2001. For Germany, as from 1992.

2. For Japan and the United Kingdom, including hotels and restaurants.

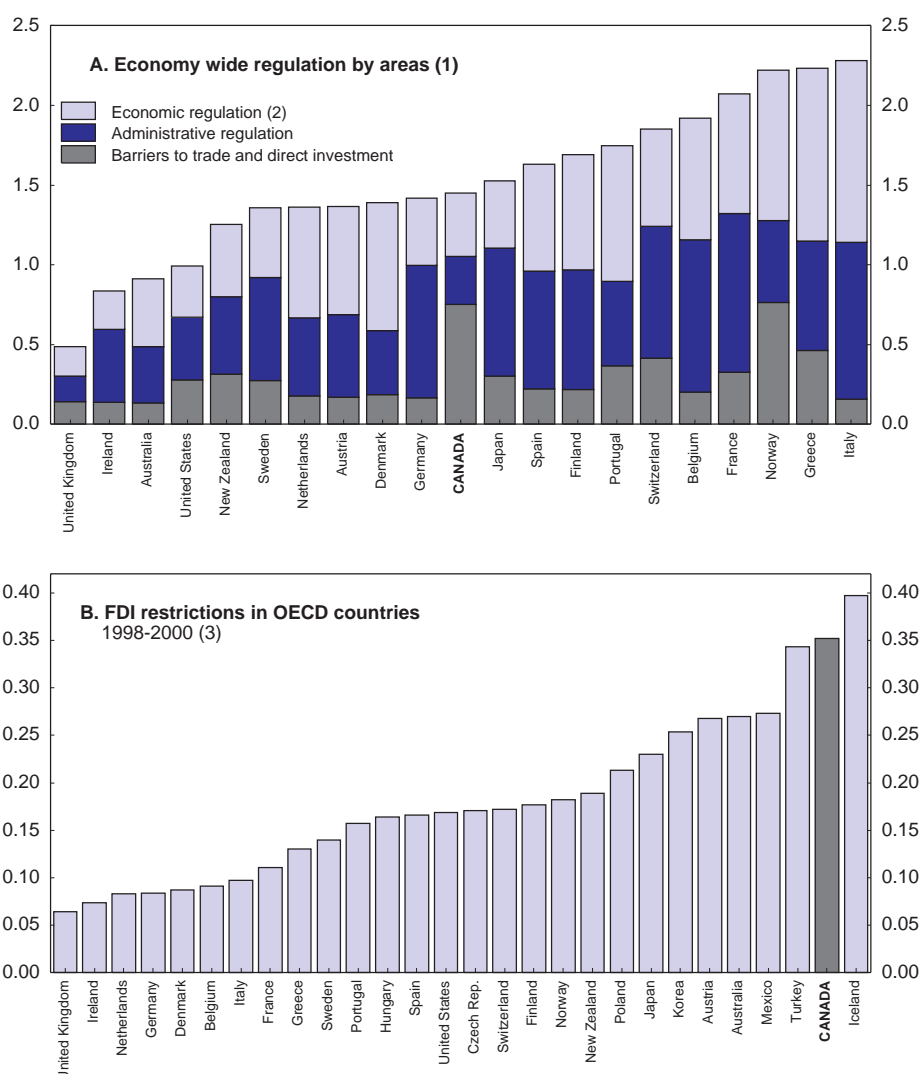
3. For Japan, New Zealand and the United Kingdom, including transport and storage. For Sweden, as from 1994.

4. For Sweden, as from 1994.

5. 2002 levels, PPP based; USA = 100.

Source: OECD estimates.

Figure 1. Indicators of economy-wide product market regulations



1. The regulatory stance is measured by a synthetic indicator ranging between 0 (least restrictive) and 6 (most restrictive). See Nicoletti and Scarpetta (2003) for details.
2. Includes barriers to competition and state control.
3. The indicator ranges from 0 (least restrictive) to 1 (most restrictive). Includes limits of foreign ownership, restrictions on foreign personnel and operational freedom, and screening requirements.

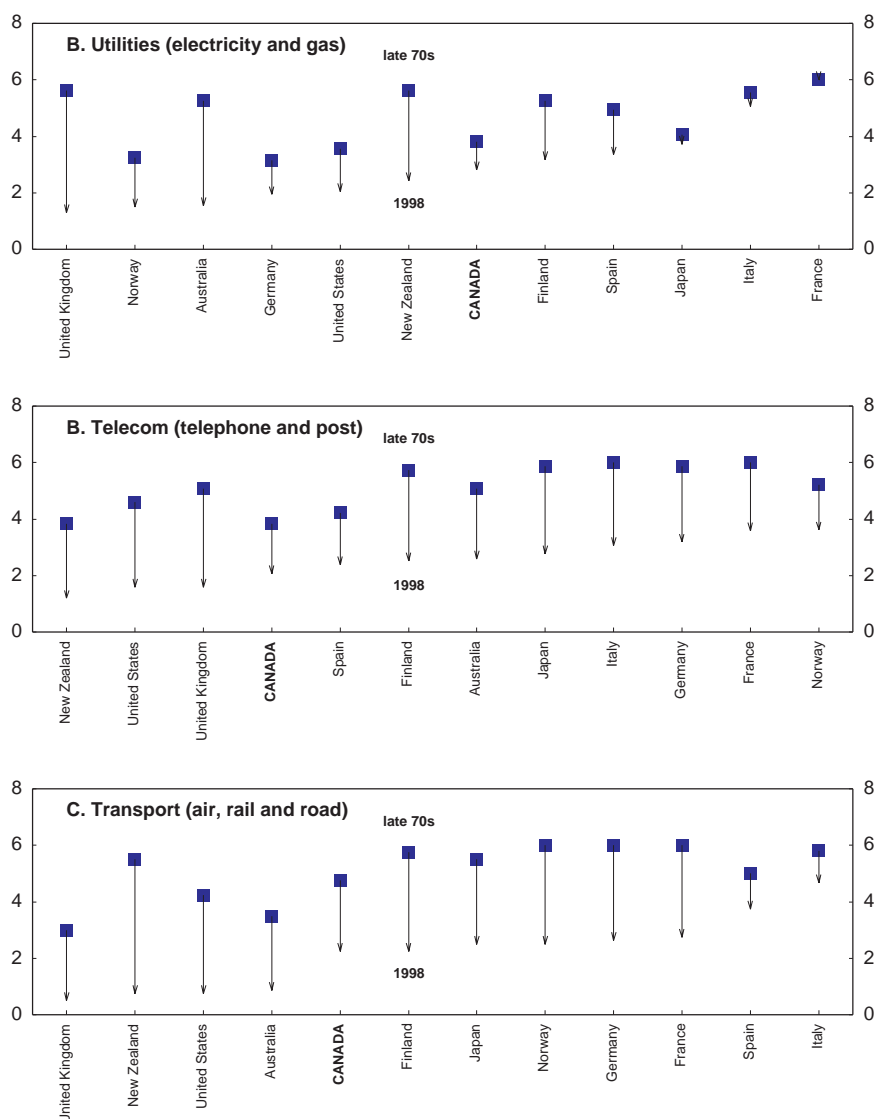
Source: Nicoletti and Scarpetta (2003).

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Although it is difficult to classify markets according to the strength of market forces, the degree of product market competition may be gauged from jointly considering a number of imperfect proxy measures. The structural measures presented below look primarily at the manufacturing sector, but some non-manufacturing sectors are also considered. Manufacturing industries are grouped into four categories. A distinction is made between low-R&D and high-R&D industries and between fragmented industries, which are those that are less concentrated and characterised by a large number of firms, and segmented industries, which are more concentrated sectors containing relatively large firms.



Figure 2. **Change in regulatory stance in selected non-manufacturing industries**  
Late 1970s-1998<sup>1</sup>



1. The regulatory stance is measured by a synthetic indicator ranging between 0 (least restrictive) and 6 (most restrictive) for each year and sector. It covers public ownership, barriers to entry, market structure, vertical integration and price controls. See Nicoletti and Scarpetta (2003) for details.  
Source: Nicoletti and Scarpetta (2003).

Structural measures such as industry concentration ratios or indices are often used as an indicator of competitive forces. Hirschman-Herfindahl indices (HHIs) show that, in general, Canadian manufacturing industries are slightly less concentrated than in comparable countries like the United States and Japan (Table 2).<sup>4</sup> The strength of competitive pressures also depends to a large extent on how exposed

4. HHIs are defined as the sum of squared market shares of each participant. For most OECD countries they are based on enterprise data. Canada, Japan and the United States use establishment data, and their HHIs

Table 2. Hirschman-Herfindahl indices of industry concentration<sup>1</sup>

	Canada 2001	United States 1997	Japan 1999
<b>MANUFACTURING</b>			
<b>Segmented, high R&amp;D</b>			
Chemicals products	29.7	14.4	14.9
Office and computing machinery	1.8	17.9	84.2
Electrical machinery	3.5	13.9	21.6
Radio, TV and communication equipment	3.4	n.a.	18.6
Motor vehicles	40.7	23.9	49.4
Other transport equipment	13.0	n.a.	109.2
<b>Fragmented, high R&amp;D</b>			
Medical appliances, optical instruments, watches and clocks	1.8	n.a.	47.4
Machinery and equipment	5.4	7.5	7.5
Furniture and other manufacturing	1.6	11.1	34.2
<b>Segmented, low R&amp;D</b>			
Coke and petroleum products	29.7	n.a.	236.9
Basic metals	30.7	29.0	46.4
Plastic and rubber products	4.1	5.0	6.8
Food and beverages	10.0	3.3	1.5
Tobacco products	10.6	n.a.	386.4
<b>Fragmented, low R&amp;D</b>			
Textiles	n.a.	6.5	3.3
Wearing apparel	n.a.	8.6	4.0
Leather and footwear	n.a.	65.1	45.6
Wood products	4.4	3.7	5.0
Paper and pulp products	30.5	14.4	23.0
Publishing and printing	2.8	3.0	17.9
Non-metallic products	3.6	6.6	8.8
Fabricated metal products	6.5	1.6	9.9

1. Based on establishment data.

Source: OECD, Statistics on enterprises by size class (SEC database) and Statistics Canada.

industries are to international competition. Import penetration rates indicate that Canadian firms face relatively stronger competitive pressure from foreign firms than their counterparts in other G7 countries (Table 3). Canada has the highest import penetration rate in total manufacturing of all the G7 countries. A sectoral breakdown shows that competitive pressures are strong in almost all industries and reflect the fact that the Canadian economy is extremely open to goods trade.

In general, mark-ups, a frequently used gauge of market power and thus competitive pressures, appear to be around the average of those estimated for other OECD countries for which data in manufacturing were available. Average mark-ups in segmented industries and in fragmented, high-R&D sectors seem to suggest that competitive pressures in these sectors are sufficient (Figure 3). Somewhat higher-than-average mark-ups in fragmented, low-R&D manufacturing industries, on the other hand, could indicate that there are problems with competitive pressures in the latter. The higher-than-average mark-ups in these sectors are due primarily to a comparatively high mark-up in the pulp and paper sector. This sector

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are therefore not comparable with those of most other countries. Establishment-based HHIs are less useful as a measure of firm-level concentration, as they neglect the existence of multi-plant firms.

Table 3. **Import penetration by manufacturing industry**  
Latest available year

	Canada	France	Germany	Italy	Japan	United Kingdom	United States
	2000	2002	2001	2001	2001	2000	2001
<b>Total manufacturing</b>	<b>52.6</b>	36.5	40.8	30.5	11.6	44.8	23.1
<b>Fragmented, low R&amp;D</b>							
Textiles	<b>62.4</b>	52.3	89.6	22.2	35.6	54.0	27.2
Wearing apparel	<b>38.8</b>	57.0	78.7	22.5	33.8	65.2	53.3
Leather products and footwear	<b>77.9</b>	86.7	89.0	44.0	57.2	86.2	79.5
Wood products	<b>15.6</b>	22.6	19.4	16.5	25.6	32.0	12.7
Paper and pulp	..	38.3	43.4	26.3	4.6	35.2	10.4
Printing and publishing	..	8.8	7.2	7.1	1.8	8.0	2.5
Non-metallic products	<b>36.8</b>	19.1	19.6	8.5	4.8	17.9	13.5
Fabricated metal products	<b>32.8</b>	14.0	15.3	7.4	3.9	16.6	8.9
<b>Fragmented, high R&amp;D</b>							
Medical precision and optical instruments	..	46.4	64.8	60.8	68.1	63.5	22.7
Machinery and equipment	<b>84.1</b>	54.3 <sup>4</sup>	36.6 <sup>4</sup>	37.6 <sup>4</sup>	8.3	57.0	26.4
Furniture manufacturing	<b>56.8</b>	41.8 <sup>4</sup>	44.0 <sup>4</sup>	20.2 <sup>4</sup>	9.9	38.8	38.5
<b>Segmented, low R&amp;D</b>							
Refined petroleum, coke	<b>10.8</b>	18.0	27.3	16.4	10.8	21.4	17.9
Basic metals	<b>44.6</b>	45.6	45.2	44.4	6.7	46.9	22.0
Shipbuilding and repairs	<b>58.6</b>	27.6	49.8	33.8	2.9 <sup>2</sup>	21.0	6.8
Rubber and plastic <sup>1</sup>	<b>42.6</b>	30.5	29.1	22.3	4.7	26.6	12.1
Food, beverages and tobacco <sup>1</sup>	<b>17.5</b>	18.4	19.5	19.7	11.2	20.5	6.3
<b>Segmented, high R&amp;D</b>							
Chemicals	<b>57.3</b>	51.1	57.7	48.6	12.1	53.3	20.4
Pharmaceuticals	<b>52.5</b>	44.7	83.6	49.1	8.8 <sup>2</sup>	63.1	18.7
Office and computing machines	<b>108.3</b>	99.3	108.6	93.0	28.8 <sup>2</sup>	105.7	68.2
Electrical machinery	<b>82.2</b>	46.2	32.4	27.0	12.0 <sup>2</sup>	53.6	46.6
Radio, TV and communication equipment	<b>74.3</b>	73.6 <sup>3</sup>	107.0	60.5	14.7 <sup>2</sup>	90.8	41.8
Motor vehicles	<b>76.4</b>	36.6	35.0	61.8	3.7 <sup>2</sup>	59.0	36.5
Aircraft	<b>82.8</b>	47.0	155.7	74.2	43.6 <sup>2</sup>	87.4	30.2
Railroad equipment	<b>37.6</b>	41.7	42.2	41.2	186.9 <sup>2</sup>	43.6	20.3
Other transport equipment	<b>67.5</b>	44.0	108.1	55.1	32.6 <sup>2</sup>	72.2	25.4

*Note:* Imports as a percentage of domestic demand (estimated as production minus exports plus imports). Values greater than 100 can occur when exports exceeded production because of the inclusion of re-exports, *i.e.* products that are imported and then re-exported without any further transformation.  
.. = not available.

1. Mix of fragmented and segmented sectors.
2. 1999.
3. 2000.
4. 2002.

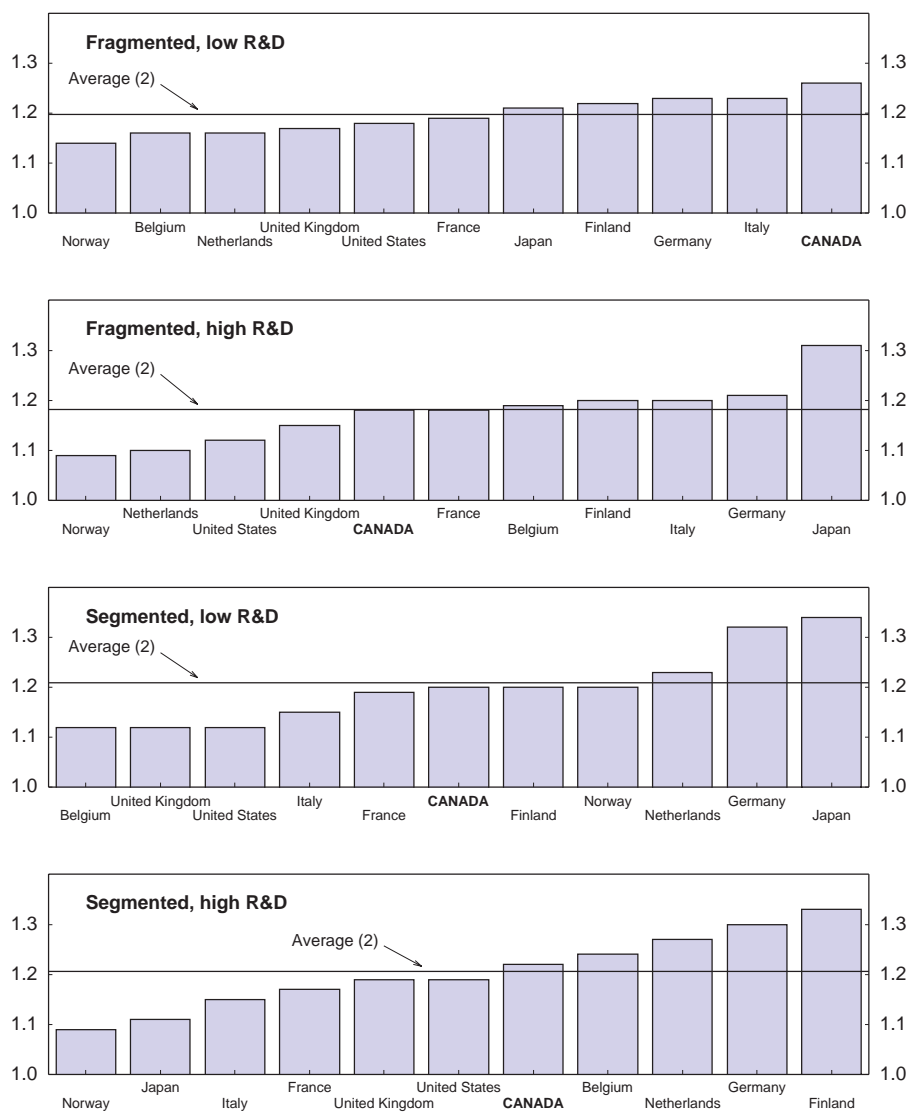
*Source:* OECD STAN Database.

is also relatively more concentrated than in comparable countries such as Japan and the United States. The above-average mark-up combined with higher concentration could indicate Canada has a comparative advantage or that competitive forces are relatively weak in this sector.<sup>5</sup>

The poor performance of some of the non-manufacturing sectors may be due in large part to a lack of competitive pressures as evidenced by relatively high mark-ups (Figure 4). In the electricity, gas and water sector, where Canada's performance has been particularly poor, Canadian mark-ups are the

5. Indeed, competitive forces may be unlawfully restrained. This sector has been often been the subject of antitrust scrutiny in other jurisdictions. Canada's antitrust enforcement agency recently confirmed that it is investigating allegations of price-fixing affecting the paper and forestry products industry. *Globe & Mail* (25 May, 2004).

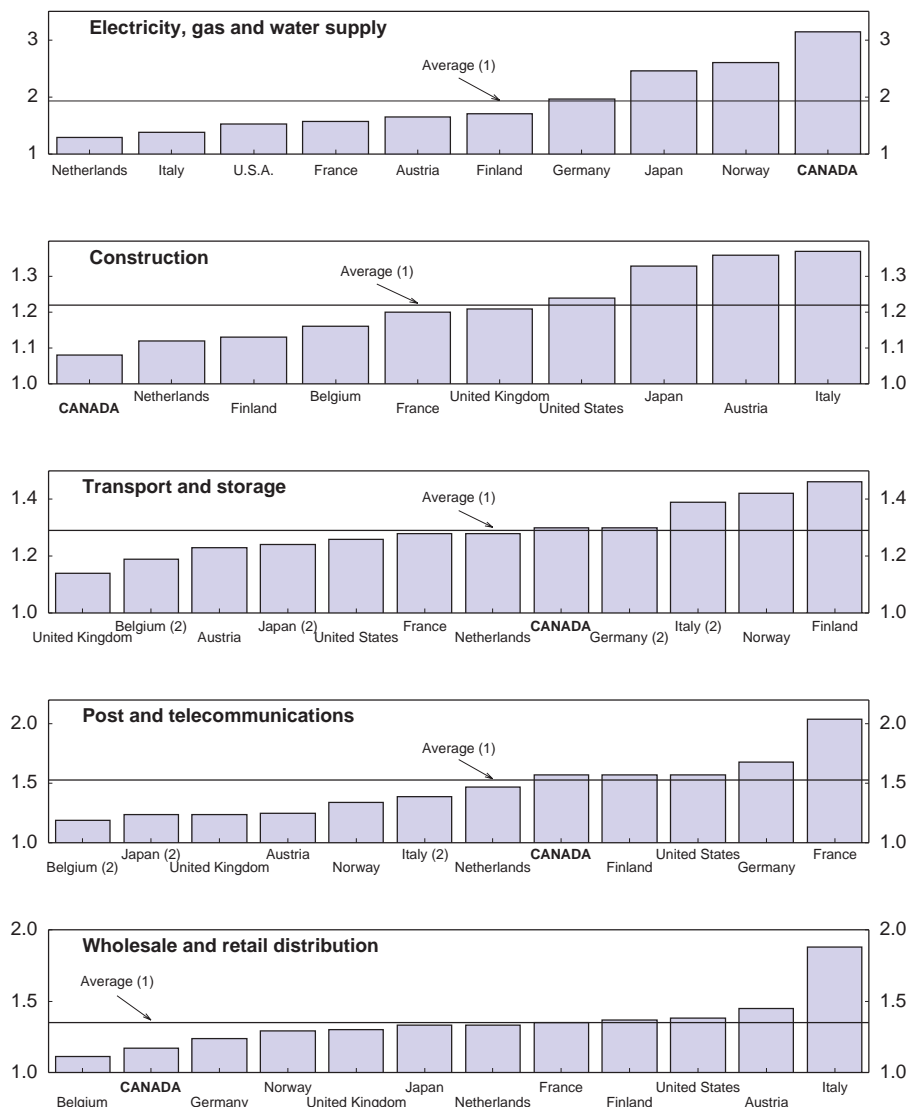
Figure 3. **Average mark-ups in manufacturing by market structure**  
1981 to latest available year<sup>1</sup>



1. For the Netherlands data is from 1987 to 2002.

2. The average mark-up is an unweighted average of the available mark-ups. ISIC, Rev3 classification.  
Source: OECD STAN database.

Figure 4. **Mark-ups in selected non-manufacturing sectors**  
1981 to latest available year



1. The average mark-up is an unweighted average of the available mark-ups. ISIC, Rev3 classification.
  2. Mark-ups refer to transport, storage and communications sector.
- Source: OECD STAN database.

highest amongst OECD countries for which data are available. The high mark-ups in part also reflect Canada's high proportion of hydroelectric power, where the costs of production are very low. While this sector is discussed in detail in a separate section below, it should be noted that barriers to entry in the Canadian electricity sector remain relatively high compared to other OECD countries. Mark-ups in post and telecommunications and transport and storage are slightly higher than average. Canadian mark-ups in the wholesale and retail trade and construction sectors, where productivity growth has been comparable to that of other OECD countries, are below average, suggesting that competitive pressures in these sectors are quite intense.

*Competition and innovation*

Competition is generally considered a primary driver of innovative activity. A more competitive environment tends to strengthen R&D and diffusion of technologies, both of which are primary factors contributing to economic growth (Ahn, 2002; OECD, 2003a). However, in 2001 Canadian expenditure on R&D as a percentage of GDP was well below the OECD average and lower than in all other G7 countries with the exception of Italy and the United Kingdom. Nonetheless, over the past two decades Canadian expenditure on R&D has been steadily increasing. While R&D expenditure at the beginning of the 1980s and 1990s was well below both the EU and OECD averages, by 2001 it was just above the EU average, though still below that for the OECD (Table 4).

While overall R&D expenditure as a percentage of GDP is comparatively low, that expenditure is primarily in high-technology sectors. At the beginning of the 1990s, Canadian high-technology industries accounted for the highest share of manufacturing R&D expenditure in the OECD (OECD, 2001a). Over the past decade its position strengthened even further, with these industries increasing their share of manufacturing R&D expenditure by over 10 percentage points, so that by 2000 high-technology industries accounted for around 80 per cent of manufacturing R&D, the highest of any OECD country (Figure 5).

Table 4. **Gross domestic expenditure on R&D as a percentage of GDP**  
1981-2001

	1981	1991	1995	2001
<b>Canada</b>	<b>1.24</b>	<b>1.60</b>	<b>1.72</b>	<b>1.94</b>
United States	2.34	2.72	2.51	2.82
Australia	0.95	1.31 <sup>1</sup>	1.66 <sup>2</sup>	1.53 <sup>3</sup>
Japan	2.29	2.93	2.89	3.09
Korea	..	1.92	2.50	2.96
Denmark	1.06	1.64	1.84	2.19 <sup>4</sup>
Finland	1.17	2.03	2.28	3.40
Norway	1.17	1.64	1.70	1.62
Sweden	2.17	2.70	3.35	4.27
France	1.93	2.37	2.31	2.20
Germany <sup>5</sup>	2.43	2.53	2.26	2.49
Italy	0.88	1.23	1.00	1.07 <sup>3</sup>
Netherlands	1.79	1.97	1.99	1.94 <sup>3</sup>
Spain	0.41	0.84	0.81	0.96
United Kingdom	2.38	2.07	1.95	1.90
EU	1.69	1.90	1.80	1.93
OECD	1.95	2.23	2.10	2.33

1. 1990.

2. 1996.

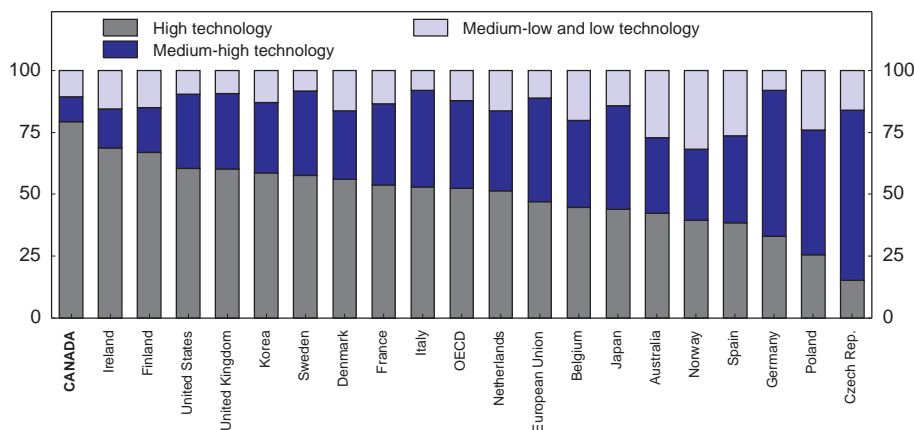
3. 2000.

4. 1999.

5. Figures for Germany from 1991 onwards refer to unified Germany.

Source: OECD.

Figure 5. **R&D expenditure in manufacturing by technology intensity**  
Percentage in total manufacturing, 2000<sup>1</sup>



1. 1998 for OECD and Norway, 1999 for EU, Denmark, France, Ireland, Netherlands.  
Source: OECD.

### ***Potential macroeconomic effects from regulatory reforms that increase competition***

The macroeconomic benefits of regulatory reforms to increase product market competition are significant. The channels through which regulatory reform affects the economy depend on a number of factors, and assessing the impact of regulatory reform is a complex task (**Box 1**). It should be noted that the possible magnitude of regulatory reform on sectoral performance is subject to considerable uncertainty, which is only multiplied in the assessment of economy-wide effects. Nevertheless, an attempt is made to quantify the potential effects of further reforms. Following the approach taken by Nicoletti *et al.* (2001), Nicoletti and Scarpetta (2003) and Nicoletti *et al.* (2003), synthetic indicators of regulatory stance are included in regressions of aggregate performance variables. This method is appealing, because it does not require any assumptions about the character of reforms or *ad hoc* assumptions regarding the impact of reforms on price-cost margins and productivity. Assuming Canada were to align its economy-wide regulation to that of the least restrictive OECD country,<sup>6</sup> it is estimated that the long-run employment rate would increase by 1.01 percentage points and that over ten years annual multi-factor productivity (MFP) growth would increase by 0.15 percentage points (Table 5). In addition, inward FDI would increase by around 25 per cent in the long run. Aligning industry-specific regulations and state control to that of the best performing OECD country would further increase annual MFP growth by 0.05 and 0.89 percentage points, respectively. This implies an increase in annual MFP growth of around 1 percentage point, equivalent to a 10 per cent increase in the level of MFP after 10 years.<sup>7</sup> If Canada were to reduce its restrictions on FDI, it is estimated that the stock of inward foreign direct investment could increase by 70 per cent relative to current levels. While the magnitude of such gains must necessarily be rather uncertain, there is clearly significant potential for improving performance, although comprehensive reforms in both product and labour markets would be also be required to achieve such results.

6. The simulations take 1998 as the base year and estimate the impact on employment, multi-factor productivity and inward FDI if Canada were to align its regulatory stance to that of the least restrictive OECD country.

7. For example, if annual MFP growth were 3 per cent, this implies that annual growth would increase to 4 per cent for 10 years, after which it would return to its average of 3 per cent. The one percentage point increase over 10 years would imply a cumulative increase in the level of MFP of over 10 per cent.

**Box 1. Economy-wide effects of regulatory reforms that increase product market competition**

Regulatory reforms that increase product market competition within a sector improve that sector's economic performance through a number of channels; these static gains are further enhanced by dynamic effects.

- Sectoral reforms change relative prices, improving overall resource allocation and consumer welfare.
- Reforms that increase competition reduce price-cost margins, thus lowering price and expanding output in the sectors concerned. This, in turn, may diminish the scope for rent-sharing with suppliers of labour and other primary and intermediate inputs, thereby putting downward pressure on wages in those industries.
- Reforms force firms to reduce slack in the use of input factors (*i.e.* decreasing X-inefficiency), enhancing labour and/or capital productivity.
- In addition to these static effects, a more competitive environment stimulates efforts to innovate and adopt new technologies, which raises productivity growth.

Quantifying the possible magnitude of regulatory reform on sectoral performance is bound to be subject to considerable uncertainty, which is only multiplied in the assessment of economy-wide effects. For example, reduced rent-sharing (stemming from lower mark-ups) might have favourable spill-over effects on wage formation more generally. Furthermore, propagation of sectoral effects into the wider economy also depends on the labour market. The initial effects of a sectoral reform may be a reduction in employment in the sector concerned, highlighting the importance of a flexible labour market in maximising the beneficial economy-wide effects of reforms.

**Table 5. Potential effects of further regulatory reforms in Canada<sup>1</sup>**

	Long-run employment rate (Percentage point increase)	Multi-factor productivity growth over 10 years (Percentage point increase at an annual rate)	Inward FDI (Per cent increase in level in the long run)
Effect of easing economy-wide regulation	1.01	0.15 <sup>2</sup>	24.4
Effect of easing industry-specific regulation	-	0.05	-
Effect of reducing state ownership	-	0.89	-
Effect of reducing FDI restrictions	-	-	70.0

1. Alignment of regulation on least restrictive OECD country in 1998. Effects estimated from the results of panel regressions relating to the employment rate, multifactor productivity and inward FDI to regulation and other variables.

2. Excluding government ownership.

Source: Nicoletti *et al.* (2001), Nicoletti and Scarpetta (2003), Nicoletti *et al.* (2003).

## Competition legislation and enforcement

Canada was the first nation to adopt an antitrust law, in 1889. Since 1986, the Competition Act has been amended on a regular basis. It is, however, currently the subject of sharp controversies and challenges (Ross, 2004). The Competition Act was amended significantly in June 2002, and additional changes are now under consideration to modify some of the statute's prohibitions, enforcement methods and sanctions. The pending proposals address many, but not all, of the elements that prevent Canada from having a fully effective antitrust regime. The present focus on the antitrust statute has also meant that less attention has been directed to reforming the government's regulatory role in areas of economic activity that are still not covered by the antitrust law.



***Institutional setting***

The Commissioner of Competition, supported by the Competition Bureau, is principally responsible for competition law enforcement and policy in Canada. Institutionally, the Competition Bureau is part of Industry Canada and must therefore report for resources and administration to a department responsible for promoting industry, not policing it. Although the Commissioner is empowered by the Competition Act to make all law enforcement decisions independently, the structural posture of the Bureau inevitably leads to the false impression that there are conflicting pressures on a Commissioner's decisions and has sometime fuelled media speculation that antitrust decisions are affected by political calculations. Although progress has already been made, lingering misperceptions regarding the independence of the Competition Bureau could be further dispelled by continuing to present its budget as a separate line item within Industry Canada's Estimates. This would reinforce the move towards greater transparency for the Bureau.

Neither the Competition Bureau nor any other agency in Canada may employ its investigative authority to study an industry without some basis for suspecting unlawful behaviour. Examination of a market's competitive dynamics is, however, a useful tool to advance the objectives of competition policy. Market studies can reveal previously unsuspected forms of private conduct or government regulation that impair competition. And the results can play an important role in promoting public understanding of how competition works and what benefits it produces. Policy discussions and consultations have taken place concerning a proposal to authorize the Commissioner to request that an independent body, such as the Canadian International Trade Tribunal (CITT), study the state of competition and the functioning of markets in any sector of the Canadian economy.<sup>8</sup> It might be more appropriate, however, to vest market competition study authority in the Competition Bureau, because it is the agency responsible for, and most knowledgeable about, maintaining competitive markets, but only if suitable protections can be put in place to preserve the confidential nature of the information and the investigative role of the Bureau.

***Substantive law and assessment of proposed reforms***

The Competition Act's provisions dealing with horizontal agreements need improvement, because they entail only criminal prohibitions and apply only to agreements that prevent or lessen competition "unduly" or enhance prices "unreasonably". By requiring proof of anti-competitive effect, the statute does not support efficient prosecution and deterrence of hard-core price-fixing cartels. Yet, by exposing all forms of horizontal cooperation to criminal penalties, it discourages legitimate joint ventures. As contemplated by pending proposals, the statute should be amended to permit ready prosecution of *per se* criminal offences and to provide appropriate civil law enforcement for strategic alliances and other agreements among competitors that deserve more refined examination.<sup>9</sup>

Non-price vertical restraints (including anti-competitive refusals to deal, consignment sales, exclusive dealing, downstream territorial or customer restrictions, tying and delivered pricing) are civil offences subject to remedial conduct orders. "Abuse of dominance", also a civil violation, requires that one or several firms "substantially or completely control" a relevant market and engage in a practice of

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8. The CITT, which is responsible for the application of Canada's anti-dumping and trade subsidy laws, may now conduct studies to assess the market impact of unlawful import trade practices. These studies are not the same as the market competition studies contemplated in the statutory proposal, and the CITT is not well suited for broader examinations.

9. The Bureau has an immunity programme applicable to the first firm that comes forward to disclose a cartel, and in recent years it has obtained substantial consent settlements in various international cartel cases that were initially investigated by other countries. The need for a better statutory vehicle to attack cartels is most pronounced for domestic conspiracies that involve only Canadian participants.

anti-competitive acts (*e.g.* predatory sales and exclusive dealing) that prevent or lessen competition “substantially” or are likely to do so. Conduct orders and divestiture are both available to remedy abuse of dominance. Although conduct orders have a curative effect, they allow violators to retain the fruits of their unlawful conduct. Divestiture is appropriate only for gross abuses of entrenched market power and has never been employed. One of the pending statutory proposals would permit imposition of administrative monetary penalties for violations of the Act’s civil provisions (other than those relating to mergers). Some version of this proposal should be adopted because the remedies currently available appear insufficient to deter anti-competitive conduct.

The Competition Act includes several criminal provisions designed primarily to protect small businesses in their relationships with large suppliers and customers. Discrimination between customers in price or other terms (for goods of like quality and quantity) is prohibited, as is the granting of advertising or marketing allowances on non-proportional terms. Neither violation requires any demonstration of an anti-competitive effect. Geographic price discrimination and selling at “unreasonably low” prices are barred where the effect, tendency or intent is to lessen competition substantially or eliminate a competitor. Proposed amendments converting these offences to civil violations and requiring demonstration of an anti-competitive effect should be adopted, because the conduct at issue is not appropriately treated as criminal behaviour subject to imprisonment. Setting “low” prices, price discrimination and offering discriminatory promotional allowances can be pro-competitive, and such practices are better handled as civil matters. The addition of the proposed administrative monetary penalties (AMPs) as a civil remedy would also ensure that the Act retains a sufficient level of deterrence for these practices.

Under the Competition Act, mergers are subject to pre-merger notification requirements and may be prevented or dissolved if the merger prevents or lessens competition substantially or is likely to do so. Unique among the G8, Canada’s statute establishes an efficiency defence where an otherwise anti-competitive merger is likely to produce efficiency gains (not otherwise attainable) that offset the effects of diminished competition. The Bureau recently challenged the use of the efficiency defence in a merger case due to concerns about the adverse impact on consumers (Box 2).

#### **Box 2. The use of the efficiency defence in merger control**

The Bureau’s original merger enforcement guidelines articulated a “total surplus” standard, under which a merger would be permitted if the gain in productive efficiency exceeded the “dead-weight loss” arising from the reduction in output that would result from the merged entity’s increased market power. The Bureau, however, broke from the total surplus standard to challenge a merger that was expected to produce dead-weight loss and other inefficiencies totalling about C\$6 million but that would also have saved the combined firms about C\$30 million. The change in approach arose from the fact that consumer prices for the product involved (bottled propane gas sold mostly to lower-income rural users and small businesses) were projected to increase by nearly 10 per cent, worth about C\$40 million. After lengthy litigation, an appellate court held that the total surplus standard was not appropriate and that other economic effects, such as wealth transfers from consumers to producers or impacts on smaller businesses, should be included in making comparisons to the claimed efficiency benefits. The court later confirmed an approach under which the consideration of wealth transfers could be confined to “regressive” redistributions. A private member’s bill would have amended the statute so that *i)* efficiency gains would be converted from an affirmative defence to a factor for consideration in assessing mergers, and *ii)* only gains in efficiency that benefit consumers (for example, in the form of competitive prices or product choice) could be considered in the competition analysis. However, the bill died on the dissolution of Parliament in May 2004.

The Competition Act also includes both criminal and civil provisions that prevent distortions of market competition by addressing false or misleading representations and deceptive marketing practices.<sup>10</sup> Proposed amendments would strengthen these provisions. These proposals, including the elimination of the existing cap on monetary penalties, should be adopted to ensure adequate deterrence of such conduct.

### *Private enforcement*

Authorising private parties to file their own antitrust complaints can usefully supplement the government's law enforcement activities. Since 2002, private parties have been able to seek conduct orders from the Tribunal for violations of section 75 and section 77 of the Act dealing with refusal to deal, market restrictions, exclusive dealing and tied selling. Time will tell how effective this limited access will be. In addition, private parties in Canada may sue in court for recovery of damages caused either by conduct violating the Act's criminal provisions or by failure to comply with an order entered under the Act by a regular court or by the Competition Tribunal.<sup>11</sup> A pending proposal would enable private parties to sue in court (not the Tribunal) for damages arising from conduct, other than a merger, with respect to which the Tribunal or other civil court had entered an order finding a violation under one of the Act's civil provisions. The pending proposal is an incremental expansion of private litigation rights, reflecting Canada's concern that private suits can be overbearing. Ideally, private complainants should be able to pursue anti-competitive conduct regardless of whether a court or Tribunal has entered an order against the respondent. If the authorities are not prepared to go that far, some form of the pending proposal is a step in the right direction. Enabling private parties to seek conduct orders from the Tribunal for violations of any of the Act's civil provisions (other than mergers) would be another desirable incremental expansion.

### **Regulatory policies**

Canada was one of the first OECD countries to adopt a regulatory reform programme. Unlike most other OECD countries, it has experienced a declining trend in the growth rate of new legislation and regulation. However, its regulated conduct doctrine exempts anti-competitive behaviour when required by regulation, and provincial regulation often displaces the competition law. Common examples include provincial marketing boards and price-setting commissions. In 1995, Canada's provinces adopted an Agreement on Internal Trade to reduce internal barriers to trade, investment and labour mobility. While progress has been made in key areas (*e.g.* labour, residency requirements, consumer-related standards and measures, transportation and the environment), barriers to internal trade continue to exist, and implementation is less effective than it could be (see below). Certain aspects of Canada's trade and investment regime also remain restrictive. Imports of some agricultural and textile products are severely restrained, and there are foreign ownership restrictions in a range of service sectors, essentially airlines, telecommunications and broadcasting (OECD, 2002*b*).

Sectors traditionally subject to significant regulation have been the focus of important reform efforts over the past 20 years. There is some evidence of a sectoral link between Canada's productivity performance and regulatory reform. Performance in the telecommunications and trucking sectors, for example, greatly improved following successful regulatory reforms introducing competition. In telecoms,

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10. See <http://laws.justice.gc.ca/enC-34/35984.html#rid-35971>, secs. 52-60 for the law's criminal provisions in this area; the civil provisions can be found at <http://laws.justice.gc.ca/en/C-34/36014.html>.

11. The Tribunal is a special court comprised of judicial and lay members that is available as a first-instance decision-maker under the Competition Act. Private actions may also be filed before the Tribunal seeking conduct orders (but not damages) against respondents for violating the Act's civil prohibitions of anti-competitive refusals to deal, exclusive dealing, tied selling and downstream marketing restrictions. To minimise strategic or frivolous litigation, plaintiffs must apply to the Tribunal at the outset for leave to pursue the case.

there is considerable competition in long-distance, wireless and internet services, and prices have fallen with the increase in competition. And, in trucking, successful reforms have led to an increase in productivity and trade with the United States (OECD, 2002*b*). Reforms in the electricity sector have been progressing at different paces across the provinces. Subsequent to problems in Ontario and California after market liberalisation and the Enron debacle, the appetite for reform has waned (Conference Board of Canada, 2003*a*). This is unfortunate, as the Canadian electricity market has witnessed comparatively poor productivity growth over the past decade, and there is considerable scope for improvement in its performance (see below). Further reforms are also required in airlines. Performance since deregulation has been disappointing, and the sector is dominated by a single player, currently under bankruptcy protection. Relaxing foreign-ownership restrictions would expand the options for developing more competition in this industry.

### *Foreign direct investment*

Foreign investment is expressly limited or controlled in several fields, notably airlines, telecoms and media. The 25 per cent ceiling on foreign ownership interests in airlines serving domestic routes along with the prohibition on cabotage — service between Canadian points by a foreign carrier — were identified by the Competition Bureau as the largest regulatory barriers to entry in the industry and prevented adoption of the best remedy for the 1999 merger of Canadian Airlines and Air Canada. In the communications sector, FDI restrictions are intended to promote Canadian content and culture and to achieve other policy goals such as universal telephone service. In both telecoms and broadcasting, foreign ownership cannot exceed 20 per cent of a Canadian operating company and one-third of a Canadian holding company. In publishing, foreign ownership of newspapers is limited to non-controlling shares, and approval of Heritage Canada is required for foreign ownership of a bookstore.<sup>12</sup> Foreign-ownership restrictions restrain the development of competitive markets and should be replaced by rules that employ direct and transparent measures to achieve cultural and other policy objectives, while allowing the maximum number of potential entrants.

### *Inter-provincial trade*

Recognition that the elaborate system of inter-provincial trade-barriers was harmful to national welfare led to efforts to reduce them. An Agreement on Internal Trade (AIT) took effect on 1 July 1995, with the stated objective to promote an open, efficient and stable domestic market and to reduce and eliminate, to the extent possible, barriers to trade and investment within Canada. The general principles articulated in the Agreement oblige the parties to:

- treat products and services from other parties no less favourably than each party's own;
- permit unfettered movement of goods, services, persons and investments across borders;
- assure that regulatory measures have a legitimate purpose and restrict internal trade no more than necessary;
- reconcile differing standards among parties; and
- maintain regulatory transparency and notify other parties of proposed actions that could materially affect operation of the Agreement.

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12. The restriction on bookstores prevented the implementation of an effective remedy with regard to a merger that combined the only two national book-selling chains in Canada.

The AIT contains provisions dealing with government procurement and bidding, investment, labour mobility, consumer-related standards and measures, agriculture and food products, alcoholic beverages, natural resources, communications, transportation and environmental protection. A promised section on energy remains to be adopted. Certain activities or subjects are exempt from AIT coverage, most notably financial services, but also regional development programmes, aboriginal peoples, cultural matters, national security and taxation.

There are two critical problems with the AIT as a vehicle for reducing inter-provincial trade barriers. First, the obligations it establishes cannot be effectively enforced. The dispute-resolution process available for dealing with allegedly illegitimate trade restrictions depends heavily on negotiation, with disputes generally being resolved between governments. Private parties have some rights to complain but can pursue a matter only if the person's home province declines to do so and if an independent screener concludes that the claim is reasonably meritorious. The only sanction against a province that fails to comply with a determination in a case brought by a private party is adverse publicity. Where a province does not comply with a determination in a case brought by a government entity, the Agreement permits the complaining province to "suspend benefits of equivalent effect or impose retaliatory measures" until the dispute is resolved. This sanction has never been used. Even if it were, the result would not be the elimination of the offending constraint, but imposition of a new one.<sup>13</sup> While this approach is patterned after international dispute resolution in the WTO arena, this seems to be an inappropriate model to use for disputes within a nation, where stronger dispute-resolution mechanisms should be available. Indeed, the result in Canada is that mutual reduction of barriers between provinces appears to be weaker than in some cases between nations.

The second problem is that, subsequent to the AIT's inauguration in 1995, provincial commitment to its implementation (and to its underlying objectives) waned seriously. In light of this, Canada's 13 provincial and territorial leaders recently formed a "Council of the Federation" for the general purposes of enhancing collaboration and improving relations with the federal government and with the more specific purpose (among others) of "strengthening the economic union, including enhancing internal trade, improving labour mobility, and harmonizing and streamlining regulation."<sup>14</sup> On 11 August 2004, the Council released a report on its progress in achieving its work plan. Progress included an agreement to bind provincial and territorial Crown corporations to obligations of transparency and the equal treatment of suppliers across Canada. Highlights also included improvements to the dispute settlement process of the AIT and greater flexibility for decision-making. The Council's project to revitalise the AIT and reduce provincial regulations that restrain competition should be vigorously pursued, and the Competition Bureau should take an active competition advocacy role in that effort.

#### *Internal barriers in the professional services sector*

Professional services are usually subject to pervasive regulation, including the exclusive exercise of certain functions, entry and access requirements, recommended or fixed prices, and restrictions on advertising and business structure or residency requirements. Such intervention is often explained by the need to correct market failures arising from information asymmetries and transactions costs. This

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13. The elaborate consultation procedures do not apply to procurement and bid protests, for which a more efficient and streamlined process is provided.

14. The Council recently released a work plan for finishing a series of tasks contemplated by the AIT that remain incomplete. These include: negotiations on the Energy Chapter (originally scheduled for completion by July 1995); bringing procurement actions by now-excluded Crown corporations under the AIT (originally scheduled for June 1996); a review of the scope and coverage of the Agriculture chapter (originally scheduled for September 1997); and implementation by all parties of the agreement for eliminating residency-based policies affecting occupational mobility (originally scheduled for July 2001).

regulation can be in the interests of both consumers and members of the profession if it improves service quality and prevents market failure.<sup>15</sup> There is, however, little empirical evidence to suggest that the pervasive set of restrictions applied to professional services in many countries improves consumer welfare (Nguyen-Hong, 2000; OFT, 2001; Paterson *et al.*, 2003). In practice such restrictions have been correlated with higher prices and less innovation, without improving quality.<sup>16</sup> These results support the view that restrictive regulatory frameworks and self-regulation by professional bodies are often used by the professions to obtain and safeguard economic rents, rather than supporting the needs and interests of consumers.

In comparison with other OECD countries, Canada has a comparatively high degree of regulation in the legal, accountancy and architectural professions (amongst the highest in the OECD) and an average degree of regulation in the engineering profession (Nguyen-Hong, 2000). In spite of the AIT, competition in professional services remains rather weak due to provincial government regulations and to self-regulation by professional bodies. Licensing requirements and other restrictions effectively make it difficult for professionals to practice across several jurisdictions. Governments can, and do, impede inter-provincial labour mobility by designing occupational qualifications for licensing, certification or registration in ways that discriminate against those from outside the province (Beaulieu *et al.*, 2003).<sup>17</sup> In addition, unwarranted anti-competitive practices, such as restrictions on permitted business structures, exclusive exercise of certain functions, residency requirements and mandatory membership of professional associations, continue to exist in almost all provinces. Although the AIT prohibits residency requirements as an employment condition and requires jurisdictions to recognize the occupational qualifications of workers from other jurisdictions and harmonise occupational standards, not all provincial governments have eliminated residency-based policies.<sup>18</sup> Assuring labour mobility, including recognition of credentials offered by foreign trained professionals, is one of the items on the agenda of the newly formed Council of the Federation in its efforts to revitalise the AIT.<sup>19</sup>

Attempts to address the problems through application of the competition law have typically been frustrated by the regulated conduct doctrine. The regulatory structure of these professions, where the associations are often acting as a provincially authorised regulatory body, has prevented the Competition Bureau from taking actions against certain activities, such as collective price setting, that might otherwise have been found to be anti-competitive.<sup>20</sup> A review is needed of the scope of provincial-government

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15. However, restrictions on competitive practices such as price competition and advertising do not explicitly address the issue of quality and can have a negative impact on competition. For example, recommended prices may facilitate the co-ordination of prices amongst service providers and can mislead consumers about reasonable price levels.
  16. OFT (2001) provides an overall review of the empirical evidence. Nguyen-Hong (2000) examined the effects of regulations on price-cost margins in engineering services and found that they led to an increase in prices on the order of 10 to 15 per cent in countries with the most restrictive practices. And Paterson *et al.* (2003) found a negative correlation between productivity and the degree of regulation, and no evidence that less restrictive regulation led to a lower quality of services.
  17. This practice is changing as a result of an AIT commitment requiring regulatory bodies to consult with each other whenever they introduce a new or revised occupational standard or entry requirement.
  18. Until recently, the federal government had also conducted hiring practices that did not comply with the AIT. Many jobs advertised by the Public Service Commission of Canada specifically excluded residents from outside Eastern Ontario or Western Quebec from applying for the job (Beaulieu *et al.*, 2003).
  19. While progress has been made in recognition of professional accreditation among provinces, the same recognition does not necessarily apply to foreign trained professionals.
  20. The courts have also been notably vigorous in protecting the legal profession from the Competition Act. For example, the Ontario law authorising the body regulating the legal profession to set up a liability

restraints that permit business and professional associations to restrict price and other forms of competition among their members. Considerable scope exists to ease restrictions on advertising and on permitted business structures, where professional rules and government regulation prevent multi-disciplinary practices, particularly in the legal and accountancy professions. Provincial government regulations that restrain competition in the professions both within a province and across provinces need to be eased, and the Competition Bureau should increase its advocacy and enforcement efforts to eliminate unwarranted anti-competitive regulations and practices.

### *Network industries*

Network industries in Canada (*i.e.* electricity, gas, water, transport and communications) account for about 10 per cent of value added and 6.5 per cent of employment. These sectors also account for a large share of intermediate inputs. Performance in these sectors is therefore important and can impact overall economic outcomes. There is now a solid body of cross-country evidence that liberalisation policies in network industries have led to higher productivity, better quality and, often, lower prices in the long run.<sup>21</sup> Capturing these benefits is not straightforward, and close attention needs to be paid to the design of reforms (Gonenc *et al.*, 2001) as seen in Canada's experiments with electricity-sector reform discussed below.

#### *Telecommunications and broadcasting*

##### Telecommunications

An independent regulator, the Canadian Radio-Television and Telecommunications Commission (CRTC) is responsible for the regulation of the telecommunications and broadcasting sectors. Telecommunications regulation is exclusively under federal jurisdiction, and, as a consequence, reform has proceeded smoothly in this sector. Canada started early relative to most OECD countries in implementing competitive reforms to its telecommunications policy and regulatory regime. That regime is characterised by structural measures that aim at improving competitive conditions, including: equal access, the use of incremental costs and price-caps for determining regulated charges, carrier pre-selection, number portability, local loop unbundling and open access for DSL (OECD, 2003*b*). Canada has had open market entry in all telecommunications services since the end of 1998. A license is required for wireless operators and international service providers (others need only register). Apart from restrictions on foreign ownership discussed below, Canada's regulatory regime is thus one of the most pro-competitive in OECD countries. The CRTC has taken a number of decisions to forbear from regulation where it has found that a service is sufficiently competitive. Services considered effectively competitive include, among others, long-distance, mobile, internet, international and inter-exchange private lines. Increased cooperation between the CRTC and the Competition Bureau (e.g. allowing the two agencies to share confidential information) would promote more effective forbearance decisions.

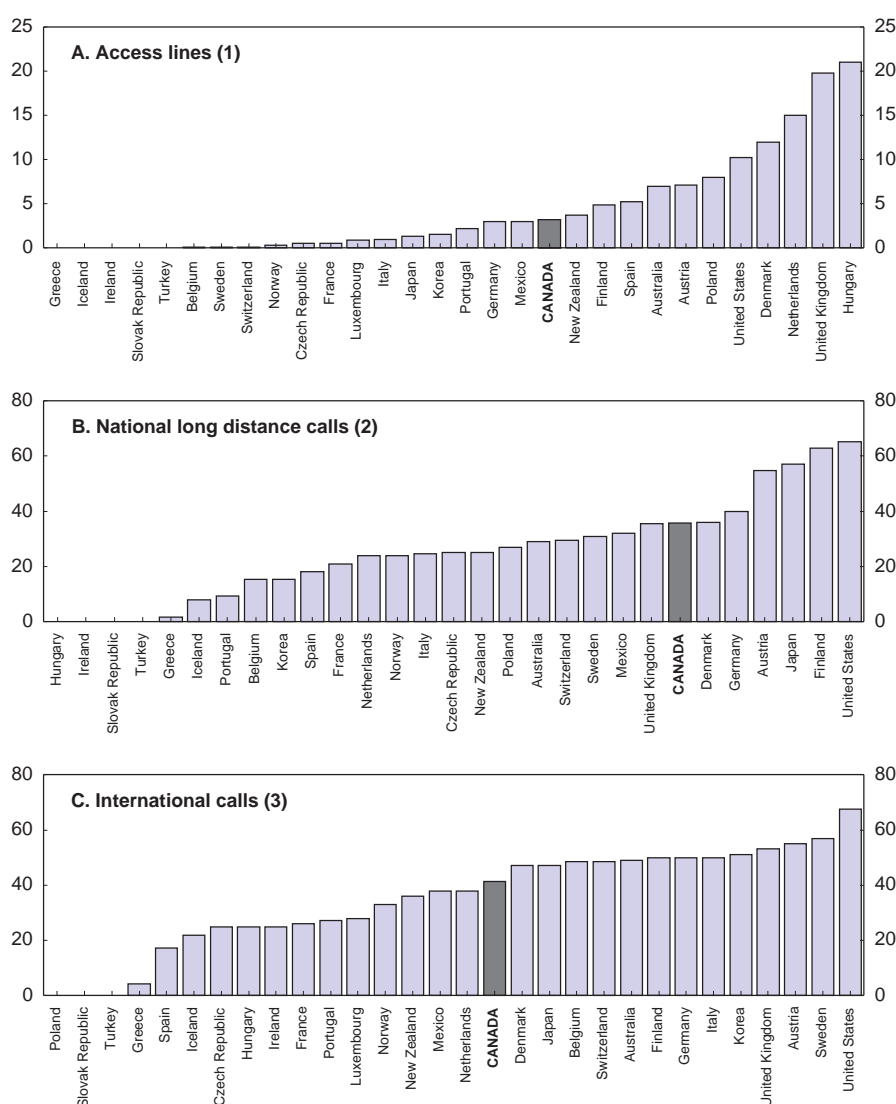
The pro-competitive regulatory stance has led to new entry. In 2001, compared with other OECD countries, new entrants in Canada had above-average market share in national long-distance calls, and their market share in international calls was almost 50 per cent (Figure 6). In contrast, competition has been

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insurance scheme and set rules for members' contributions was interpreted by the courts to authorise a bar-managed monopoly.

21. See OECD (2001*b*), which reviews the literature and adds more evidence on the relationship between regulation and performance in these sectors. The set of OECD Reviews of Regulatory Reform (of which OECD, 2002*b* for Canada) also constitute a rich source of information on the effects of industry-specific reforms on performance.

Figure 6. Estimates of market shares of new entrants  
2001



1. Percentage of access lines. For Japan and Switzerland data refers to 2000.
2. Percentage of switched minutes. For Ireland and New Zealand: 1998; for Japan, Switzerland and United States: 2000.
3. Percentage of minutes of international traffic. For Ireland, Japan, Switzerland and United States: 2000; for New Zealand: 1997.

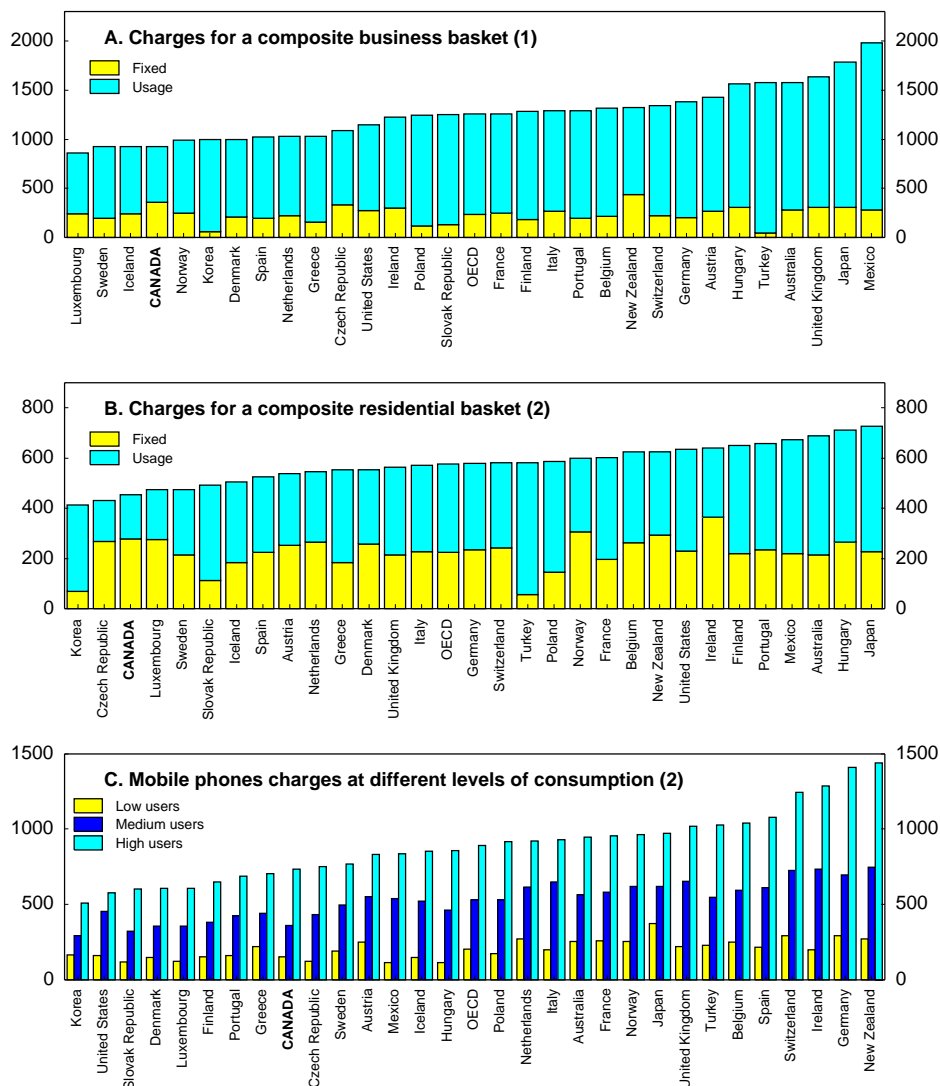
Source: OECD (2003b).

slower to take off in the market for local calls, where the market share of access lines held by new entrants is relatively low, particularly when compared with other countries that also began the reform process early on (e.g. the United Kingdom and the United States). The new entry has resulted in important benefits for consumers (CRTC, 2002). Prices faced by both business and residential consumers and mobile telephone users are amongst the lowest in the OECD (Figure 7). While competition from cable companies to provide local telephone services has been slow to develop, it has emerged for broadband access. Reflecting this, charges for DSL internet access are also amongst the lowest in the OECD, resulting in Canada's high penetration of broadband (high-speed internet access) (Figure 8). The CRTC, however, does not fully



control entry into the market, since Industry Canada is responsible for granting of spectrum licences. In order to more clearly separate the policy functions from regulatory functions, it would make more sense to transfer the power to grant of spectrum licenses to the CRTC.<sup>22</sup>

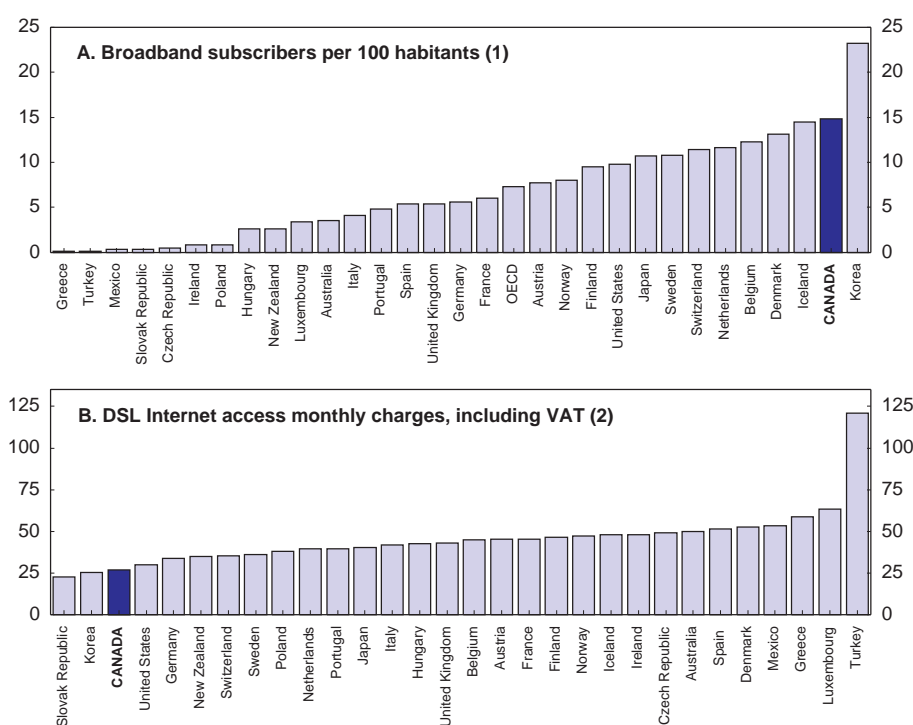
Figure 7. Telecommunications charges  
US dollars, May 2004



1. Excluding VAT.
  2. Including VAT.
- Source: OECD, Communications Outlook database.

22. Industry Canada should, however, retain its responsibilities for spectrum planning, which is a policy function.

Figure 8. Broadband penetration and user charges



1. December 2003.
2. US dollars per month. Modem rentals are excluded, as in most countries they can be purchased by users. October 2003.

Source: OECD, Communications Outlook database.

## Broadcasting

The CRTC also regulates broadcasting. Its responsibilities include licensing radio and television programming and broadcast distribution. Broadcast programme distribution was opened to competition in 1997, so cable firms now face competition from direct-broadcast satellites and multi-point, multi-distribution systems. In radio, a single owner can have up to four commercial stations (two AM, two FM) in any market that has eight or more commercial radio stations, and up to three stations (with a maximum of two in either bandwidth) in smaller markets. In television, owning more than one conventional, over-the-air station is permitted in a few markets, such as Vancouver-Victoria. Cable television firms may own an unlimited number of analogue cable programme sources, but limits remain on owning digital cable speciality channels. The CRTC reports to Parliament through the Minister of Canadian Heritage (responsible for broadcasting policy). This ministry is responsible for cultural policy, which raises the question whether it is the best sponsor for the CRTC. The CRTC is charged with regulating and supervising Canadian broadcasting, and its primary goals include promoting Canadian content and culture and programming diversity. In order to meet these goals, all kinds of broadcasting (*i.e.* television, cable and satellite) are subject to Canadian-content requirements. It might be better if the CRTC were made a separate, stand-alone agency reporting directly to Parliament or through the Minister of Industry, rather than Canadian Heritage.

The relative openness of the Canadian telecommunications market comes with a major proviso: Canada is one of six OECD countries that have restrictions on foreign ownership and investment in public

telecommunications operators (OECD, 2003*b*). These restrictions could have negative effects, limiting investment, increasing the cost of capital and delaying the spread of new technologies (CRTC, 2003; Quigley, 2004). Because of these concerns, this issue has received considerable attention over the last few years. In 2002, the government requested that the House of Commons Standing Committee on Industry, Science and Technology examines the issue of the continued need for the foreign investment restrictions for telecommunications carriers. While it had been asked to look only at telecommunications, the Committee recommended that the restrictions on FDI in both telecommunications and broadcast distribution be completely eliminated. However, the House of Commons Heritage Committee, reviewing the broader question of broadcasting policy, subsequently recommended that these restrictions remain in place for both the telecommunications and cable industries. The Government has undertaken to review the basis of these conflicting recommendations. It should take this opportunity to abolish them, which can be done without weakening cultural objectives. Policy objectives such as maintaining a national identity and cultural sovereignty can be met more efficiently through the direct and transparent mechanisms that are already in place, regardless of whether a firm is Canadian or foreign owned.

### *Energy*

The Canadian energy sector has had the weakest productivity growth of all the G7 countries, and performance has also been poor compared to a number of smaller OECD countries where reforms have been introduced (Table 1). Except for inter-provincial and international trade, electricity and gas regulation in Canada is under provincial and territorial jurisdiction.<sup>23</sup> In addition to exports and inter-provincial trade, the federal government, through the National Energy Board (NEB), exercises jurisdiction over the construction and operation of international electricity transmission lines and international and inter-provincial gas pipelines.

### Electricity

Electricity prices in Canada are among the lowest in the OECD (an indication is provided in Figure 9). The low prices partly reflect Canada's low costs, emanating from hydro-electric power. Firms that are government-owned may also face a lower cost of capital. Tariffs in most provinces are regulated on a cost-of-service (or cost-plus), historical-cost basis. It may also reflect regulatory choices and has the undesirable side effect of discouraging investment in new capacity that will be increasingly needed in coming years. Despite low average prices, and reflecting the lack of both performance-based rate making (*e.g.* price-cap or RPI-X regulation) and competition, Canadian mark-ups in electricity, gas and water sectors, as noted earlier, are the highest amongst OECD countries for which data are available.

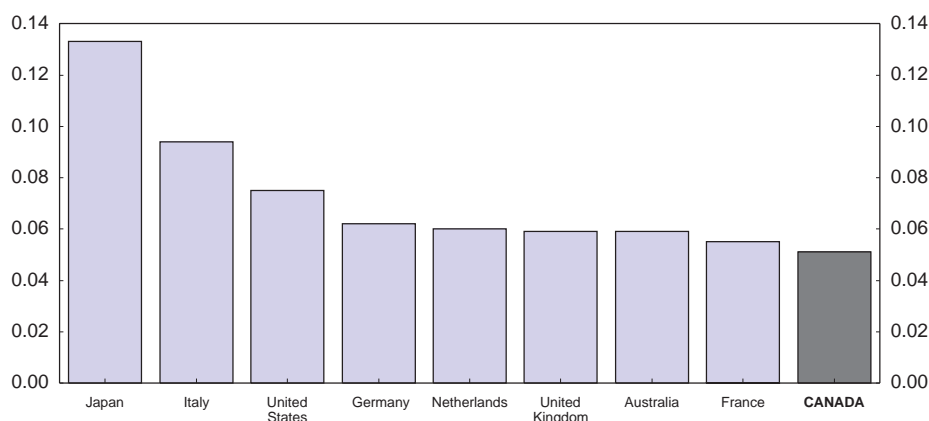
Both industry structure and policies vary considerably across provinces. Each province has a separate regulator. Provincial regulators in some cases operate at arms-length from the government, in other cases they are part of the policy branches of their respective governments (IEA, 2004). Few provinces have introduced major reforms. Only two provincial governments — Alberta and Ontario — have established markets characterised by wholesale and retail unbundling, although their specific market designs differ.<sup>24</sup> In Ontario and Alberta, an independent system operator (ISO) sets and administers policies for grid interconnection, transmission planning and spot market operation. The remaining provinces are largely characterised by vertically integrated, provincially owned utilities, which offer bundled services at regulated rates to consumers (Global Competition Review, 2004*a*). Although some

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23. Provinces in Canada have more jurisdiction over energy matters than the sub-national governments of any other federal country in the OECD (IEA, 2004).

24. These two provinces represent about 40% of the total electrical load in Canada. This percentage is comparable to the electrical load in the United States having access to competitive markets.

Figure 9. Average electricity prices  
US dollars/kwh  
May 2002



Note: Figures are based on an average demand load of 831 (kva) and consumption of 222 000 (kwh) per month;  
Source: KPMG (2002).

provinces generally consider reform of the electricity sector to be necessary, reforms have been aimed at inducing private-sector investment and protecting access to US electricity markets while avoiding full competition in generation and retail markets (e.g. establishing wholesale access and, in some cases, an open-access transmission tariff). While relatively small generators exist, they seldom operate in direct competition with the dominant Crown corporation. Municipally owned distributors are common.

In their attempt to create competitive electricity markets, Alberta and Ontario took different paths. Ontario set a timeline for gradual divestiture of its Crown corporation plants, while Alberta chose a more proactive approach to creating competition by holding public auctions for control over the generation capacity of incumbents' facilities. Electricity market liberalisation in Alberta and Ontario both occurred at times of increased prices and volatility. However, measures taken in Alberta and Ontario to cope with electricity price hikes provide some useful insights, particularly in terms of government intervention and preserving incentives for investment (Conference Board of Canada, 2003b) (Box 3).

In the long term, the introduction of competition should improve performance in the sector, but provinces are politically reluctant to undertake reforms, especially after what happened in Ontario. However, both the success of reforms in Alberta and lessons from the mistakes in Ontario could be used to guide policymakers. If provinces are to move ahead with reforms, then unbundling is crucial in establishing competition in the sector, since vertically integrated incumbents can impede the functioning of the market through cross-subsidisation and discrimination in network access (Gonenc *et al.*, 2001; EC, 2003). Insufficient unbundling may form a barrier to competition, and numerous studies argue that legal and management unbundling are not enough and that further separation is warranted.<sup>25</sup> In the absence of restructuring, competitors and potential investors will be deterred by concerns regarding the level of commitment by provincial governments to competitive electricity markets and the potential conflicts of interest arising from the fact that provincial governments are often incumbents' sole shareholder.

25. For example, see Newbery (2002a and 2002b).

### Box 3. Lessons from Ontario's and Alberta's electricity market reforms

**Ontario** passed the Energy Competition Act in 1998 to restructure Ontario Hydro and to introduce competition in the province's electricity market. Ontario Power Generation Inc. (OPG), which has assumed all of the generation assets of the former vertically integrated Ontario Hydro, is a provincially owned corporation that generates three-quarters of the electricity in Ontario. Hydro One, also government owned, is a separate company that has assumed the transmission and distribution assets of the former Ontario Hydro. Hydro One provides non-discriminatory open access and transmits wholesale electric power to municipal utilities that in turn retail it to customers in their service areas. To avoid abuse of dominant position by OPG, the Market Power Mitigation Agreement (MPMA) under the Act required OPG to divest 4 000 MW of its generation assets (other than nuclear and hydroelectric) by 2006 and reduce its overall share of the market to 35 per cent by 2012.

While the process of establishing competition took longer than expected, all customers in Ontario had the right to choose their supplier of electricity by May 2002. Prices during the spring were lower than regulated prices, but a combination of an unusually hot summer and delays in bringing nuclear generating capacity back on line led to prices that were much higher than anyone had anticipated. To reduce the impact of price hikes on consumers, the Ontario government capped retail prices for about half of the market at a price well below the cost of power and the entry cost of new plant. The wholesale market was left in place, with the government obligated to make up any difference between the wholesale cost of electricity and the frozen retail price. This resulted in a need for substantial government subsidies and a reluctance of investors to move into the Ontario market. Reforms which aim to correct some of the past failures are currently being discussed and put in place by the new government. Concerned about the impact on the province's finances, the new government has raised prices to cover costs. While preserving elements of competition by measures such as putting contracts for new generation capacity out to competitive tender, the draft legislation proposed by the Ontario government in June 2004 would terminate Ontario's previous plan to divest most of the province's power generation assets to private control. The proposals also include the regulation of prices for some consumers, the regulation of the output from certain power plants owned by Ontario Power Generation (OPG), an expansion of the role of the Ontario Energy Board (OEB) as the independent sector regulator, and the creation of a new agency, the Ontario Power Authority (OPA), with a broad mandate concerning supply and conservation measures.

In **Alberta**, most generation and transmission assets have historically been privately owned. In the mid-1990s Alberta deregulated its electric power industry, establishing open transmission access and a competitive power pool. An independent regulator, the Alberta Electric Utilities Board (AEUB), was created to regulate the development of the market. Transmission facilities are the property of investor-owned companies, and the ISO provides non-discriminatory transmission access and is responsible for transmission system planning. Since 1 January 1996, all electricity has been sold into a power pool, and retail competition was introduced in January 2001, with consumers free to purchase their electricity from any licensed retailer.

The retail market in Alberta was opened at the height of the California electricity crisis, when Western North American electricity and natural gas prices were very high. Alberta, as part of an interconnected market which includes California and the north-western United States, experienced very high market prices. Most small consumers were purchasing electricity through their local distributors, who in turn were purchasing much of their needs at spot prices. These distributors applied to the regulator to raise retail electricity prices so as to pass through higher costs to customers. To cope with the situation, the government placed a one-year temporary retail price cap on electricity for 2001. But, unlike Ontario, the government set the price cap at a relatively high level, well above long-run marginal cost, in order to preserve a signal for new investment. Investment in new generating capacity has continued, and wholesale prices in 2002 declined to pre-2000 prices, reflecting the new generation capacity that has since come on line (IEA, 2004).

With a view to improving the overall competitiveness of the Canadian electricity industry, the federal government also has an important role to play and could be more active in advocating electricity market reforms. Inter-provincial electricity flows account for about 10 per cent of total Canadian electricity consumption. Most provinces have agreed to provide cross-provincial transmission access in accordance with the AIT. However, while federal and provincial energy ministers negotiated the text of an Energy Chapter in 1998 to be a part of the AIT, passing the text on to trade ministers to conclude, this chapter has

yet to be approved.<sup>26</sup> The development of inter-provincial and international electricity trade could be an important factor in bringing about new entry and ensuring that effective competition develops within provincial and regional markets. There is some scope for the federal government to be more active in promoting the expansion of transmission capacity which would support electricity market reforms by promoting the development of a more integrated Canadian electricity market.

### Natural gas

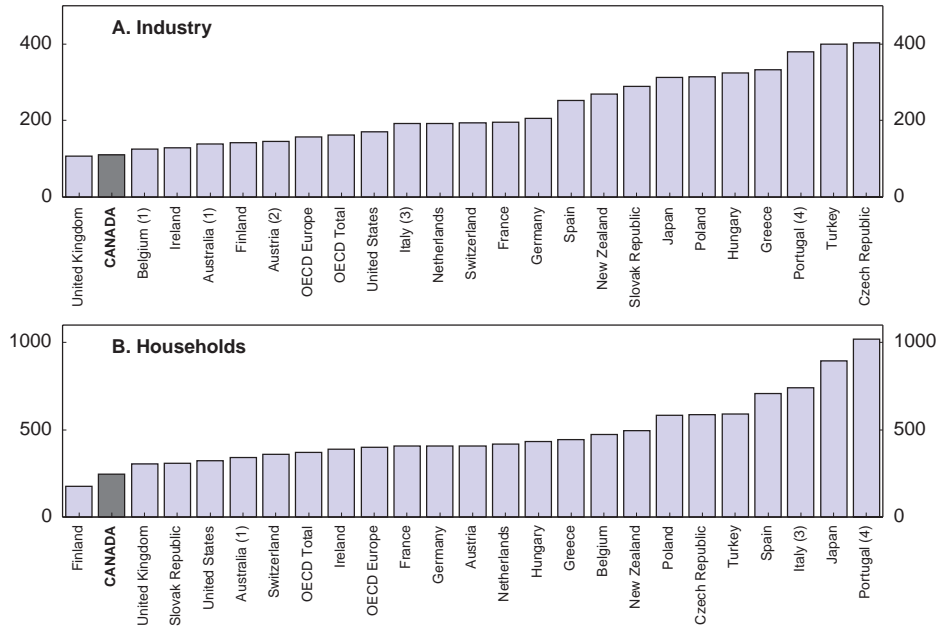
In contrast with electricity, the natural gas wholesale market has been largely deregulated since the mid-1980s. Natural gas prices were deregulated in 1985, and prices to both industrial and household consumers are very low by international comparison (Figure 10). Since deregulation, many producers and marketers have increased the proportion of their total gas supplies that is sold on a short-term or spot basis. A handful of firms are involved in gas storage, pipeline transmission and distribution to customers. All natural gas transmission pipelines, both inter-provincial and intra-provincial, are owned and operated by private-sector companies.<sup>27</sup> Development of the transmission network is left to the market, although inter-provincial transportation rates, conditions of access and terms of service are regulated by the National Energy Board. Local distribution companies (LDCs), with two exceptions, are privately owned,<sup>28</sup> and are regulated at the provincial level by public utility commissions. LDCs are large buyers of natural gas, and regulations seek to ensure they pass gas price variations directly through to household and small commercial customers. Third-party access is allowed to the distribution grids, and large industrial customers and power generators can buy gas directly from producers. Some smaller customers in the residential and commercial sectors can also buy gas directly from producers through aggregators, brokers and other middlemen. The regulated rates for distribution service are for the most part based on cost of service. More recently, however, the mode of regulation has begun to shift from cost-based to performance-based ratemaking (Global Competition Review, 2004*b*). Lessons from the successful deregulation of the natural gas market could be transposed to the electricity market, particularly with regard to third-party access and the introduction of wholesale competition.

### Airlines

The airline industry was largely deregulated in the late 1980s. The 1987 National Transportation Act relaxed entry controls, ended licence restrictions on flight frequency and aircraft type and permitted discounting. However, unlike the United States, airline deregulation in Canada was not accompanied initially by a noticeable fall in prices (Figure 11). Competition has been slow to emerge. When Canadian Airlines, one of the country's only two major scheduled airlines got into financial distress, the government allowed the other major carrier, Air Canada, to acquire it, over-riding a set of Competition Bureau recommendations on restructuring that would have enhanced competition through opening to foreign

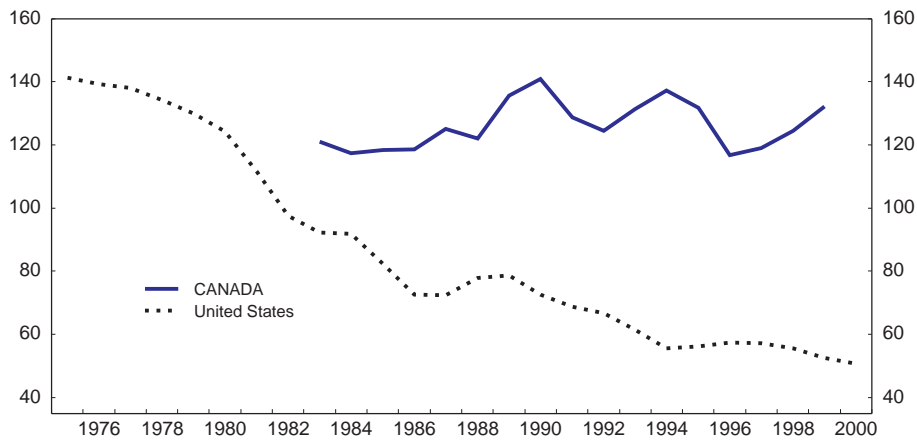
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26. Once approved, the Energy Chapter will provide for non-discriminatory, open transmission access across the provincial boundaries and establish dispute resolution procedures. However, Canadian provinces with major inter-provincial and international cross-border electricity trading have adopted the US FERC's open-access transmission tariff and thus already provide open access to US markets.
  27. The one exception is the natural gas transmission system in Saskatchewan, TransGas Limited, which is a provincial Crown corporation.
  28. SaskEnergy is a Crown corporation in Saskatchewan, and in 1999 Manitoba Hydro (a Crown corporation) bought the private gas distribution company, Centra Gas Manitoba.

**Figure 10. Retail prices for natural gas**  
 US dollars/10 mill. kcal (GCV basis) (using PPPs)<sup>1</sup>  
 2000



1. 1997.
  2. 1999.
  3. 1998.
  4. 2002.
- Source: IEA.

**Figure 11. Average domestic air fares<sup>1</sup>**  
 US, Canadian 1983 dollars



1. Average fares per passenger. Does not take into account possible changes in average flight length.  
 Source: US Bureau of Transportation Studies; US Bureau of Labor Statistics; Canada Aviation Statistics Centre.

ownership.<sup>29</sup> Given the potential damage to consumers resulting from increased market concentration, additional regulatory measures were necessary. Amendments were introduced to the Competition Act to address specific concerns about abuse of dominance in the airline industry. Clauses were added to the Act in 2000 establishing airline-specific conduct regulations and specifying one particular action explicitly as constituting “anti-competitive” behaviour: the denial of access on reasonable commercial terms to essential facilities or services or a refusal to supply them.<sup>30</sup> The regulations also describe what conduct would be considered predatory or exclusionary, and provide that it would be anti-competitive for a dominant airline to operate or expand capacity on a route at fares that do not cover the “avoidable cost” of the service.<sup>31</sup> After investigating allegations by low cost carriers, the Competition Bureau (which was charged with enforcing these sectoral rules) concluded that they were not being respected and in March 2001 brought an application to the Tribunal. Full resolution of this case was still pending when Air Canada filed for bankruptcy protection in April 2003 and has gone into abeyance until Air Canada emerges from such protection.

Low-cost domestic carriers have emerged and expanded their market presence in the past few years.<sup>32</sup> Despite new entry, however, Air Canada has not faced effective competition on a national basis, especially for the important business segment of the market, where flight frequency and network connections are imperative. With regard to the longer-term outlook for competition in the sector, there has been renewed public discussion about the possibility of expanding the current Canada/US open skies agreement, which has been in place since 1995 for trans-border services, to include domestic services (Lazar, 2003). However, cabotage alone will be insufficient in bringing about a healthy and competitive industry. In light of Air Canada’s current financial circumstances, the recommendations made by the Competition Bureau in 1999 are even more valid today than at the time. In order for the industry to become more competitive, the restrictions on foreign ownership should be eliminated as they serve mainly to restrict competition and protect the interests of incumbents at the expense of consumers (Stanbury and Ross, 1999). Moreover, the government should seek to negotiate a North American Common Aviation Area (NACAA) with the United States and Mexico to allow carriers from all three countries to compete freely throughout North America.

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29. The Competition Bureau had recommended that the government allow 100 per cent foreign ownership of carriers that serve only domestic routes; permit up to 49 per cent of voting shares of other Canadian carriers to be held by foreigners; and allow modified sixth freedoms, either on a unilateral or reciprocal basis. Modified sixth-freedom rights would allow US carriers to offer one-stop service across Canada *via* US hubs, *e.g.* Ottawa to Calgary *via* Minneapolis.

30. Those “essential” facilities or services, described further in regulations, include operating slots, interline arrangements, airport gates and related facilities, maintenance services and baggage handling.

31. Avoidable costs are all costs that can be avoided by not producing the good or service in question (in general, the variable costs and the product-specific fixed costs that are not sunk). This is a stricter test than average variable costs to assess predatory pricing and has particular significance for its application to a range of industries (*e.g.* network industries) that have high fixed and low variable costs and, as such, have been virtually immune from claims of predatory pricing. Other kinds of anti-competitive conduct described in the regulations are pre-empting slots or facilities to withhold them from the market and using commissions, incentives, loyalty programmes or scheduling to discipline or eliminate a competitor or to prevent entry.

32. Companies such as WestJet, CanJet and Jetsgo have aggressively expanded their market presence. Between January 2000 and May 2004, Air Canada’s share of domestic seat capacity fell from 87 per cent to approximately 51 per cent, reflecting a parallel increase in the combined market shares of low-cost carriers. *Financial Times* (7 July, 2004).



## Concluding remarks and priorities for policies

In general, competitive forces appear to be relatively strong in Canada. Economic and administrative regulations are comparatively low, and, apart from its restrictions on direct foreign investment, Canada has a relatively open economy. In spite of its openness, important barriers to competition and internal trade remain due to regulations at the provincial level, especially in professional services. Sectors that are exposed to international competition (especially the manufacturing sector) are doing well. With the exception of fragmented, low-R&D industries, mark-ups in Canada are similar to those observed in other countries. The unusually high mark-up in fragmented industries is attributed to the pulp and paper sector. The liberalisation of the telecommunications industry has been a success. The market is very dynamic, with strong competitive pressures from cable operators, particularly in the market for broadband internet access. Performance has been relatively poor in some sectors sheltered from competition. This is especially the case in the electricity sector, where the industry is for the most part characterised by vertically integrated, government-owned monopolies.

In a few industries the Canadian government has determined that it is appropriate to restrict foreign ownership in order to achieve social and other economic policy objectives such as affordable universal service and promoting Canadian content and culture. Such industries include airlines, telecommunications and broadcasting. However, these barriers are often an inefficient way to achieve these policy objectives, and more direct means should be used in place of restrictions on foreign ownership. Foreign investment, for example, could have preserved competition in the airline market, rendering behavioural remedies, which are difficult to control, unnecessary.

The priorities for policies that emerge from the above analysis are the following:

### *On competition legislation and enforcement*

- Authorise the Bureau or an independent third party to undertake studies of competition in market sectors.
- Amend the statute to permit effective prosecution of hard core cartels, provide appropriate civil law enforcement for agreements among competitors that deserve more refined examination, and convert the statute's pricing provisions (other than hard-core cartels) from criminal offences to civil violations requiring demonstration of an anti-competitive effect.
- Authorise monetary penalties for abuse of dominance and other civil violations of the Competition Act; expand private actions to cover all of the Act's civil provisions (except mergers); and permit private plaintiffs to sue and recover for damages for violations of the Act's civil provisions.

### *On regulatory policies concerning inter-provincial trade*

- Vigorously pursue the Council of the Federation's project to reduce anti-competitive provincial regulations, with the Competition Bureau taking an active competition advocacy role in that effort. To support this, undertake a comprehensive review of the impact of provincial government restraints on competitive markets, identifying sectors where reform is most needed.
- Implement without further delay the agreement for eliminating residency-based policies affecting occupational mobility, originally scheduled for July 2001. Provincial and territorial governments also need to ensure consistent treatment and mutual recognition of credentials offered by foreign-trained professionals.

- Ease regulations imposing advertising restrictions, pricing regulation and prohibitions on permitted business structures and multi-disciplinary business practices.

#### *On network industries*

##### Telecommunications and broadcasting

- Make the CRTC a separate, stand-alone agency reporting directly to Parliament or through the Minister of Industry rather than Heritage Canada.
- More clearly separate policy functions from regulatory functions by transferring to the CRTC authority now held by Industry Canada for granting spectrum licences. Spectrum planning, which is a policy function, would remain with Industry Canada.
- Eliminate restrictions on foreign direct investment.

##### Energy

- Approve without further delay the text of an Energy Chapter for the Agreement on Internal Trade, originally scheduled for July 1995.
- The federal government needs to be more active in advocating electricity market reforms and in ensuring that effective competition develops within provincial and regional markets by promoting increased inter-provincial and international transmission capacity.
- Rather than introducing competition at the edges, there is considerable scope for provincial governments to be more active in introducing competition in the electricity sector — enhancing market reforms, particularly through structural unbundling involving the separation of generation from transmission and distribution.

##### Airlines

- Eliminate the restrictions on foreign ownership.
- Remove restrictions to cabotage, and seek to negotiate a North American Common Aviation Area (NACAA) with the United States and Mexico to allow carriers from all three countries to compete freely throughout North America.

## Bibliography

- Ahn, S. (2002), "Competition, Innovation and Productivity Growth: A Review of Theory and Evidence", OECD Economics Department Working Papers, No. 317.
- Beaulieu, E., J. Gaisford and J. Higginson (2003), *Interprovincial Trade Barriers in Canada*, The Van Horne Institute, AGMV Marquis: Calgary.
- Conference Board of Canada (2003a), "Curbed Enthusiasm for Electricity Reform", *Regulatory Policy and Taxation*, Briefing, May.
- Conference Board of Canada (2003b), "Electricity Restructuring: Letting Prices Work", *Regulatory Policy and Taxation*, Briefing, September.
- CRTC (2002), *Status of Competition in Canadian Telecommunications Markets*, Report to the Governor in Council, Ottawa, December.
- CRTC (2003), *Status of Competition in Canadian Telecommunications Markets*, Report to the Governor in Council, Ottawa, November.
- EC (2003), "Second Benchmarking Report on the Implementation of the Internal Electricity and Gas Market", European Commission Staff Working Paper, SEC (2003) 448, Brussels.
- Global Competition Review (2004a), *Electricity*, Stephens & George, London.
- Global Competition Review (2004b), *Gas Regulation*, Stephens & George, London.
- Golub, S. (2003), "Measures of restrictions on inward foreign direct investment for OECD countries", OECD Economics Department Working Papers, No. 357.
- Gonenc, R., M. Maher and G. Nicoletti (2001), "The Implementation and the Effects of Regulatory Reform: Past Experience and Current Issues", OECD *Economic Studies*, No. 32, Paris.
- IEA (2004), *Energy Policies of IEA Countries: Canada*, forthcoming, International Energy Agency, Paris.
- KPMG (2002), *Competitive Alternatives*, May.
- Lazar, F. (2003), "Turbulence in the Skies: Options for Making Canadian Airline Travel More Attractive", *C.D. Howe Institute Commentary*, No. 181, April.
- Newbery, D. (2002a), "Regulatory Challenges to European Electricity Liberalisation", *Swedish Economic Policy Review*, Vol. 9, p. 9-43.
- Newbery, D. (2002b), "Regulating Unbundled Network Utilities", *The Economic and Social Review*, Vol. 33, No. 1.

- Nguyen-Hong, D. (2000), "Restrictions on Trade in Professional Services", Productivity Commission, Staff Research Paper, AusInfo, Canberra.
- Nicoletti, G. and S. Scarpetta (2003), "Regulation, Productivity and Growth: OECD Evidence", *Economic Policy*, April.
- Nicoletti, G., S. Golub, D. Hajkova, D. Mirza and K. Yoo (2003), "Policy Influences and International Integration: Influences on Trade and Foreign Direct Investment", OECD Economics Department Working Papers, No. 359.
- Nicoletti, G., A. Bassanini, E. Ekkehard, J. Sébastien, P. Santiago and P. Swaim (2001), "Product and Labour Market Interactions in OECD Countries", OECD Economics Department Working Papers, No. 312.
- OECD (2001a), *Science, Technology and Industry Scoreboard*, Paris.
- OECD (2001b), *Special Issue on Regulatory Reform, Economic Studies*, No. 32.
- OECD (2002a), *Economic Outlook*, No. 72, Paris.
- OECD (2002b), *Canada: Maintaining Leadership Through Innovation*, OECD Reviews of Regulatory Reform: Paris.
- OECD (2003a), *The Sources of Economic Growth in OECD Countries*, Paris.
- OECD (2003b), *Communications Outlook*, Paris.
- OFT (2001), *Competition in Professions*, Office of Fair Trading, No. 328, London.
- Paterson, I., M. Fink and A. Ogus (2003), "Economic Impact of Regulation in the Field of Liberal Professions in Different Member States", Institute for Advanced Studies, Vienna.
- Quigley, N. (2004), "Dynamic Competition in Telecommunications: Implications for Regulatory Policy", *C.D. Howe Institute Commentary*, No. 194, February.
- Ross, T. (2004), "Canadian Competition Policy: Progress and Prospects", *Canadian Journal of Economics*, Vol. 37, No. 2.
- Stanbury, W. and T. Ross (1999), "Avoiding the Maple Syrup Solution: Comments on the Restructuring of Canada's Airline Industry", Fraser Institute Occasional Paper, No. 32.

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