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Canadian Provincial Investment Climate Report 2006 Edition

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Executive summary

The allocation of investment capital, both internationally and domestically, is increasingly acknowledged as a leading contributor to a jurisdiction's economic success or failure. It is, therefore, critical to have objective, empirical measurements that document differences in investment climates.

The Provincial Investment Climate Index is an important step in creating empirical measurements of investment climates. Specifically, the Provincial Investment Climate Index quantitatively evaluates public policies that create and sustain positive investment climates.

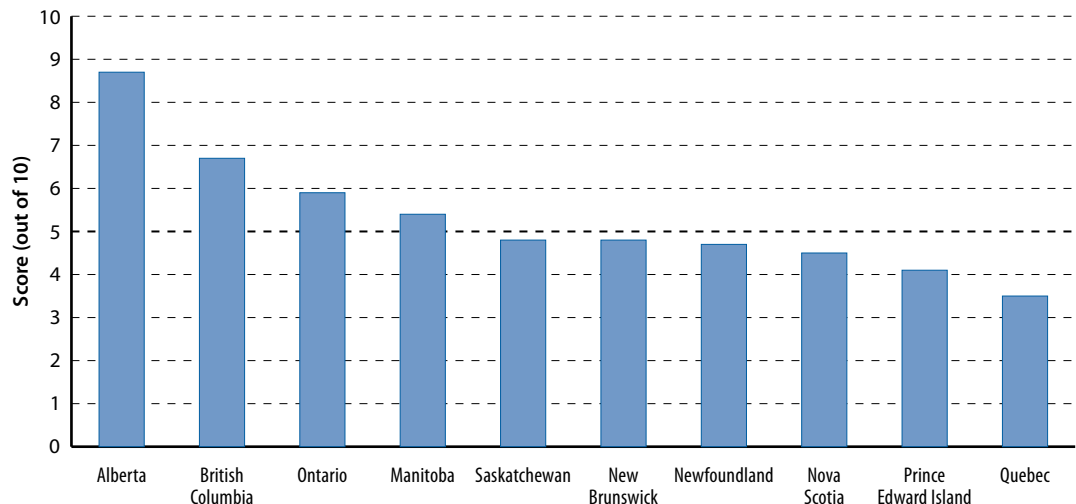
The basis of the Index is the Investment Managers Survey (IMS) Series undertaken by The Fraser Institute between 1994 and 2004. The IMS regularly surveyed Canada's leading money managers on a host of issues, including provincial investment climates and the policies that contributed to positive and negative climates. The policies identified in those surveys (1998–2004) were used to create the Provincial Investment Climate Index.

Provincial Investment Climate Index

The Provincial Investment Climate Index is calculated based on seven measures: Corporate income tax, Fiscal prudence, Personal income tax, Infrastructure, Corporate capital tax, Flexible labour markets, and Regulatory burden. These measures were assessed by the IMS respondents as having an important influence on the creation and maintenance of a positive investment climate.

Canada's two western provinces, Alberta and British Columbia, topped the rankings for the Provincial Investment Climate Index. Alberta ranked first with a score of 8.7 out of 10 and was clearly Canada's top province [Exsum figure 1, Exsum table 1]. British Columbia

Exsum figure 1: Provincial Investment Climate Index, 2006



Exsum table 1: Provincial Investment Climate Index, 2006 (scores and ranks out of 10)

	Overall		Component 1 Corporate income tax		Component 2 Fiscal prudence	
	Score	Rank	Score	Rank	Score	Rank
Alberta	8.7	1	8.9	2	9.3	1
British Columbia	6.7	2	8.5	3	7.3	2
Ontario	5.9	3	7.1	5	5.4	5
Manitoba	5.4	4	6.8	6	5.8	4
Saskatchewan	4.8	5	3.1	9	6.6	3
New Brunswick	4.8	5	7.8	4	5.2	6
Newfoundland	4.7	7	2.1	10	4.0	8
Nova Scotia	4.5	8	5.7	7	4.6	7
Prince Edward Island	4.1	9	5.7	7	1.9	10
Quebec	3.5	10	10.0	1	2.5	9

Sources: The formula used to calculate each component may be found in Appendix A.

followed in second place with a score of 6.7 out of 10. Ontario ranked third with a score of 5.9. Manitoba was the only other province to garner an overall score (5.4) in excess of 5.0. All of the remaining six provinces received scores below 5.0 with Quebec placing last overall with a score of 3.5, indicating it had the most unfavourable investment climate in Canada.

Components of the Provincial Investment Climate Index

A brief description and overview of the results for each of the measures included in the Provincial Investment Climate Index are presented below.

1. Corporate income tax This component assesses the degree to which provinces tax business profits in the form of corporate income taxes. Quebec received the highest score with a perfect 10.0 out of 10.0. Most jurisdictions performed reasonably well on this component; only Saskatchewan and Newfoundland failed to receive a score above 5.0.

2. Fiscal prudence Fiscal prudence measures how well provinces have managed their budgets and whether provincial governments are spending in a sustainable manner. Alberta received the highest fiscal prudence score with 9.3 out of a possible 10.0, followed by British Columbia with a score of 7.3. Four other provinces received scores above 5.0: Saskatchewan (6.6), Manitoba (5.8), Ontario (5.4), and New Brunswick (5.2). The remaining four provinces failed to receive a score above 5.0. Prince Edward Island received the lowest score (1.9).

3. Personal income tax This component measures the personal income tax burden based on income tax rates and the levels of income at which the various rates apply. The three western Canadian provinces (British Columbia, Alberta, and Saskatchewan) dominate this component of the Index. Alberta ranks first with a perfect score of 10.0 out of 10.0. British Columbia, Saskatchewan, and Manitoba followed Alberta with scores of 8.3, 7.5, and 5.0. The other six provinces all received scores below 5.0. Newfoundland received the lowest score (1.5).

Component 3 Personal income tax		Component 4 Infrastructure		Component 5 Corporate capital tax		Component 6 Flexible labour market		Component 7 Regulatory burden	
Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
10.0	1	5.9	3	10.0	1	7.0	1	10.0	1
8.3	2	6.7	1	8.8	4	3.0	7	3.6	7
4.5	6	6.3	2	6.4	6	5.0	2	6.4	5
5.0	4	4.7	6	4.5	8	3.1	6	7.8	3
7.5	3	5.9	3	0.4	10	2.5	8	7.8	3
4.8	5	3.9	8	6.8	5	2.5	8	2.1	9
1.5	10	3.5	9	9.6	2	4.0	3	9.1	2
2.5	8	5.1	5	6.2	7	3.6	5	4.0	6
3.5	7	1.8	10	9.0	3	4.0	3	3.0	8
2.5	8	4.3	7	2.5	9	1.9	10	0.0	10

4. Infrastructure This component assesses the transportation infrastructure in each province including road and railroad networks, as well as seaport and airport capacity. Overall, British Columbia ranked first although with a somewhat weak score of 6.7 out of 10. Ontario followed in second place with a score of 6.3. Saskatchewan and Alberta tied in third place with a score of 5.9. Nova Scotia was the only other jurisdiction to receive a score above 5.0. Alarmingly, there were five provinces (Manitoba, Quebec, New Brunswick, Newfoundland and Prince Edward Island) that failed to achieve scores in excess of 5.0. Prince Edward Island ranked last with a score 1.8 out of 10.

5. Corporate capital tax This component of the Index evaluates the use of corporate capital taxes. Alberta ranked first with the lowest use of corporate capital taxes among Canadian provinces (10.0 out of 10). Most provinces performed reasonably well on this component; only Manitoba, Quebec and Saskatchewan, heavy users of corporate capital taxes, received scores below 5.0. Saskatchewan received the lowest score of 0.4, ranking it last among the provinces.

6. Flexible labour markets Flexible labour markets evaluates the labour laws present in each province based on differences in labour relations laws. Alberta was only one of two provinces to receive a score of 5.0 or higher; it received a score of 7.0 out of a possible 10.0. Ontario was second with a score of 5.0. Quebec, Saskatchewan, and New Brunswick maintained the most rigid labour relations laws in Canada. Quebec had the lowest score of 1.9 and ranked last.

7. Regulatory burden This component measures the burden of government regulations, often referred to as “red tape.” This measure is based on the recent survey of regulatory costs completed by the Canadian Federation of Independent Business (CFIB). The specific measure used is the estimated regulatory costs as a percentage of the provincial economy.

The results are quite striking. Alberta ranked first with a score of 10.0 out of 10.0. However, Alberta’s regulatory costs represent an alarming 2.6% of GDP. Quebec ranked last with regulatory costs representing a worrisome 4.5% of GDP; it received a score of 0.0.

Reconciling the survey and the empirical results

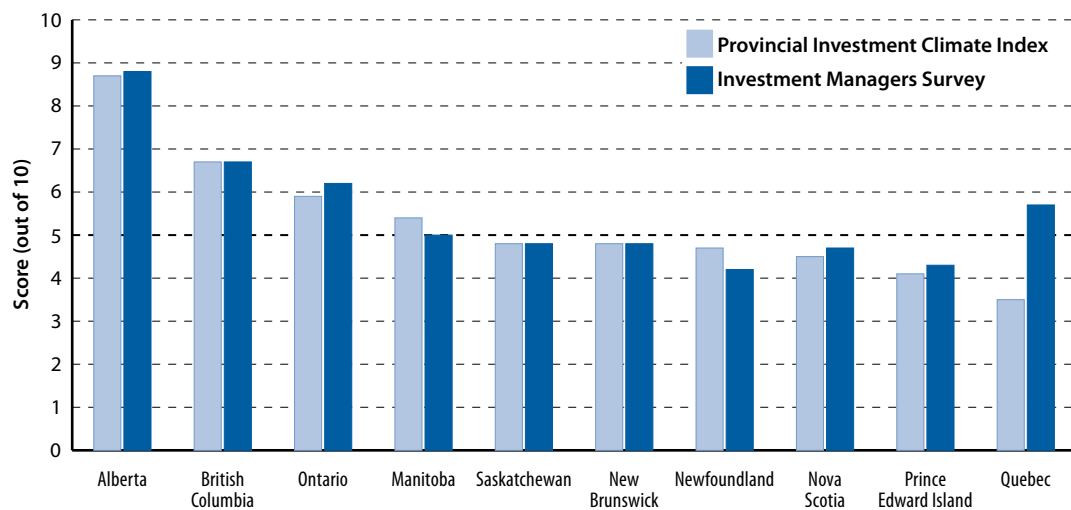
An interesting question addressed in the paper is the relationship between the empirically measured provincial investment climates and those determined subjectively by the survey respondents. The comparison of 2004 survey results with the quantitatively measured results of the Provincial Investment Climate Index indicates a high degree of similarity. Exsum figure 2 highlights the survey scores (2004) as well as the empirically determined scores from the 2006 Provincial Investment Climate Index.

Alberta, British Columbia, and Ontario are the three provinces with the most favourable investment climate in Canada according to both the Provincial Investment Climate Index and the 2004 Investment Manager Survey results.

The most noticeable difference between the results obtained by the Index and the Investment Manager Survey relates to Quebec and Newfoundland. According to the Index, which relies on empirical evidence, Quebec maintains the worst investment climate in Canada. According to the survey, however, Quebec was ranked fourth best in Canada. Conversely, Newfoundland was considered by survey respondents to have the least favourable investment climate in Canada while according to the Index it ranks seventh.

One of the main explanations for this difference is what is referred to as “home bias,” according to which there is a built-in predisposition for domestic or home-based investment due to a greater awareness and understanding (information) of one’s home jurisdiction compared to foreign ones. Thus, the fact that Quebec possesses one of the

Exsum figure 2: Provincial Investment Climate Index compared to the results of the 2004 Investment Managers Survey



Source: Sources: Karabegović, Clemens, and Godin, 2004; calculations by the authors.

largest concentrations of financial firms and investors outside Ontario provides a strong explanation for why it performs well on subjective evaluations even though empirically it is shown to be quite weak.

Conclusion

The Provincial Investment Climate Index results indicate that, to varying degrees, all provinces have room to improve their public policies so as to make their jurisdictions more conducive to investment. Provinces are encouraged to continue policies in areas where they performed well and to pursue reforms in areas where they fared poorly.

Introduction

Business investment is a powerful driver of economic growth, providing the necessary resources to acquire new machinery and equipment, introduce new technologies, create new job opportunities, and ultimately improve productivity. Politicians, bureaucrats, and citizens in general are becoming more aware of the importance of business investment as a critical determinant of current and future economic prosperity.

Jurisdictions are constantly in competition with one another to provide a positive investment climate—a business environment that is conducive to investment. Investors respond to differing investment climates by allocating investment resources in a way that maximizes the rates of returns on their investments. Attracting and sustaining high levels of investment requires an ongoing commitment to those policies and factors that contribute to a positive investment climate.

This study represents a step forward in understanding and, more importantly, documenting the public policies that contribute to, and sustain, positive investment climates. It assesses empirically, and then ranks, the investment climates of the Canadian provinces based on a number of public policies that were identified by money managers in surveys conducted over a seven-year period as contributing to a positive investment climate. [1] The Fraser Institute has been surveying senior investment managers in Canada on a variety of issues since 1994. From 1998 to 2004, the surveys were used to assess and rank the investment climate of the Canadian provinces. [2] This study uses the results from those surveys to create a quantifiable index of provincial investment climates.

Organization of this study

Section 1 provides an overview of the Investment Managers Survey, including a brief history and a profile of respondents. This section also outlines how respondents rated the degree to which different public policies promote and maintain a positive investment climate. This is particularly important since it is these results that are the foundation for our quantitative index measuring provincial investment climates.

Section 2 presents the provincial rankings and index scores for each component of investment climate as well as the overall scores and rankings for the Provincial Investment Climate Index.

Section 3 compares the quantitative index scores with the results from the 2004 Investment Managers Survey in order to determine and explain deviations.

Conclusions and recommendations

Appendix A provides more detailed methodological information about the construction of the index.

Appendix B provides an overview of research completed on the economics of the various components used in this study.

1 Overview of the Investment Managers Survey

The first Investment Managers Survey (IMS), which asked respondents a broad range of questions, was completed in the winter of 1994. The surveys were originally issued on a quarterly basis. [3] Each survey included about a dozen questions with topics ranging from the likelihood of Quebec sovereignty to the financial outlook for markets. All surveys included questions rating the performances of the Bank of Canada and the federal minister of finance.

Beginning in 1998, each issue of the Investment Managers Survey featured a focus chosen from a range of topics from financial regulation to provincial investment climates. [4] There were two sets of questions asked about investment climate. The first inquired about what policies, such as taxation, regulation, and infrastructure were important to implementing and maintaining a positive investment climate. The second set of questions related to subjective evaluations by the respondents of the state of the investment climate in each of the Canadian provinces.

Profiles of investment managers

Between 1998 and 2004, six Investment Managers Surveys dealing with provincial investment climates were completed. [5] During this period, a total of 193 responses were received from investment managers, an average response rate of 23%. Cumulatively, the respondents represented the management of roughly \$1.5 trillion in combined nominal assets [table 1]. [6]

Table 2 provides information on the nature of financial firms responding to the surveys between 2000 and 2004. [7] Nearly half the responses (48%) came from pension-fund managers and another 41% came from investment-fund managers. Managers of venture-capital funds made up only 5% of survey respondents. The results for years between 2000 and 2004 mirror the weighted average results with little deviation.

Table 1: Profile of investment managers—size of portfolio

Year of survey	Number of responses	Nominal value of assets (in billions of dollars)
1998	37	\$140.0
1999	26	\$130.0
2000	31	\$248.8
2001	24	\$282.2
2002	30	\$330.9
2004	45	\$335.5
Total	193	\$1,467.4

Note: There was no survey completed in 2003.

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000, 2001; Clemens and Dixon, 1999; Dixon, Mihlar, and Clemens, 1998.

Table 2: Profile of investment managers—nature of business

Year of survey	Venture capital	Pension fund	Investment fund	Other	Total number of responses
2000	10%	55%	35%	0%	31
2001	0%	57%	35%	9%	24
2002	3%	52%	38%	7%	30
2004	4%	40%	51%	4%	45
Total number of responses, 2000–2004	6	63	53	6	130
Average, 2000–2004	5%	48%	41%	5%	

Note: Sum of annual results may not be 100% due to rounding.

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000 and 2001; Clemens and Dixon, 1999; Dixon, Mihlar, and Clemens, 1998; calculations by the authors.

Table 3 provides information about the geographic location of respondents to the survey. Not surprisingly, a large portion of respondents identified their operations as being based in Ontario (56%). Significant responses were also received from Quebec (16%), Alberta (13%) and British Columbia (11%).

Table 3: Profile of investment managers—location

Year of survey	British Columbia	Alberta	Ontario	Quebec	Other
2000	10%	16%	58%	10%	6%
2001	21%	17%	38%	21%	4%
2002	11%	7%	52%	22%	7%
2004	7%	13%	67%	13%	0%
Average, 2000–2004	11%	13%	56%	16%	4%

Note: Sum of annual results may not be 100% due to rounding.

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000 and 2001; Clemens and Dixon, 1999; Dixon, Mihlar, and Clemens, 1998.

Components of a positive investment climate: IMS results

The following section summarizes the results from the IMS about the policies identified and ranked by respondents as contributing to, and sustaining, a positive investment climate. This is a critical discussion since it forms the basis for the creation of an empirical measure of investment climates.

The IMS focused on provincial investment climates issued between 2000 and 2004 evaluated 11 policies as having a potential effect on provincial investment climates. [8] These

components were ranked by investment managers on a scale from 1 to 10, with 10 being the best possible score. Survey data from these four surveys was aggregated to produce an average rating for each of the components. [9]

Descriptions of the components

Corporate income tax This component measures the amount of income tax corporations pay on their profits. Since all jurisdictions are subject to the federal corporate income tax, this component refers exclusively to provincial corporate income taxes.

Fiscal prudence Fiscal prudence is the degree to which provincial budgets balance revenues and spending. Jurisdictions that avoid deficit spending or maintain comparatively small surpluses will exhibit strong fiscal prudence, which minimizes the need to raise taxes in the future. [10]

Personal income tax This component measures the amount of tax individuals must pay on earned income such as salaries and wages. Only provincial income taxes were considered since all jurisdictions must pay federal personal income taxes.

Capital gains tax Individuals and firms are subject to capital gains taxes when an asset is sold whose value has increased beyond its nominal purchase price. In Canada, at both the federal and provincial level, a portion of the capital gains is treated as income and taxed at the individual's highest marginal personal income-tax rate.

Infrastructure Infrastructure generally represents the breadth of a jurisdiction's transportation network (highways, railways, seaports, and airports), which facilitates the movement of goods, services, and labour.

Corporate capital tax Corporate capital taxes are profit-insensitive levies assessed on the total capital (debt and equity) of a firm once it reaches a prescribed level of capital. The use of corporate capital taxes in Canada has been waning but they are still used both by the federal government and by a number of provinces.

Flexible labour markets This component represents the ease with which labour markets can adjust wages and the mix of labour and capital in response to changes in the marketplace. Labour markets that can readily adjust exhibit a high degree of flexibility while those that are prescriptively regulated are considered rigid.

Regulatory burden Regulations are the rules and standards, sometimes referred to as "red tape," that governments use to control the transactions, operations, and entry of firms. This intervention in the marketplace affects many aspects of an economy, including health-and-safety standards, business licensing, remittance of taxes, and ability of workers to engage in certain types of activities.

Cost-efficient environmental regulations Cost-efficient environmental regulations measure the extent to which the social benefits of environmental policies outweigh their costs, as measured by their negative impact on employment and economic growth.

Provision of social services This component measured the spending on social services undertaken by provinces. Programs included in this category were primary and secondary education, social assistance (welfare), health-care, and child-care services.

Aid to the private sector This component measured the level of government subsidies provided to private firms. This assistance took many forms, including special tax breaks, direct cash grants, and favourable regulations such as the imposition of trade barriers.

Summary of survey results

Overall, the survey results (table 4; figure 1) strongly suggest that properly structured and competitive taxes are imperative for the creation and maintenance of a positive investment climate. Taxes on corporate income (8.4), personal income (8.3), capital gains (8.0), and on corporate capital (7.9) were ranked as four of the most important components. Survey respondents also ranked fiscal prudence (8.3) and infrastructure (7.9) highly. The results of the surveys also indicate that flexible labour markets, appropriate general regulations, and cost-efficient environmental regulations are important though less so than the other components. In contrast, aid to the private sector (3.9) and the provision of social services (4.8) were seen to have negligible effect, if any, on creating and maintaining a positive investment climate.

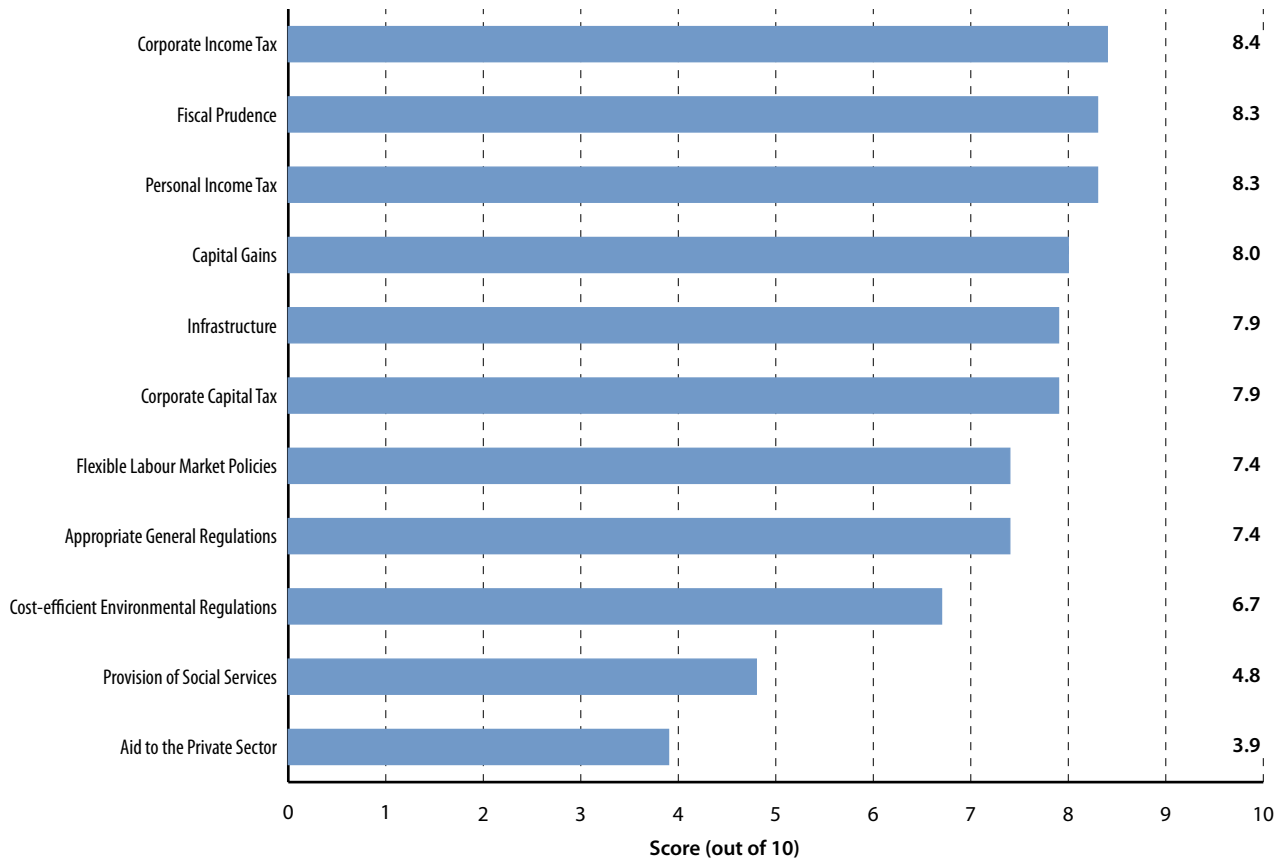
Table 4: The most important economic policies according to the results from Investment Managers Surveys, 2000–2004

	Score (out of 10)
Corporate income tax	8.4
Fiscal prudence	8.3
Personal income tax	8.3
Capital gains	8.0
Infrastructure	7.9
Corporate capital tax	7.9
Flexible labour-market policies	7.4
Appropriate general regulations	7.4
Cost-efficient environmental regulations	6.7
Provision of social services	4.8
Aid to the private sector	3.9

Note: Data from the four surveys of 2000, 2001, 2002, and 2004 were aggregated to produce an average rating for each of the components. There was no survey completed in 2003.

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000, 2001.

Figure 1: The most important economic policies according to investment managers surveyed from 2000 to 2004



Note: There was no survey completed in 2003; survey data from the four surveys (2000, 2001, 2002, 2004) was aggregated to produce an average rating for each of the indicators.

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000 and 2001.

Selection of components

The study made every effort to include policy areas identified by the survey respondents as having an important effect on creating and maintaining a positive investment climate. Unfortunately, there were four policy areas that were not included due to a lack of data or because they were already included in other policy areas.

Capital gains taxes Capital gains taxes were excluded because of the way in which they are calculated. Recall that capital gains are taxed at an individual's highest personal income-tax rate. This treatment is consistent across the provinces. Thus, the results of an analysis of capital gains taxes across provinces would exactly parallel an analysis of personal income-tax rates, thus double counting their effect. As a result, the study excluded the capital gains tax from its components.

Cost-efficient environmental regulations There was no data-set available that adequately measured differences among the provinces' use of cost-efficient environmental regulations. It is hoped that data will become available so this component can be included in future editions.

Provision of social services and Aid to the private sector Finally, the study excluded both the provision of social services and aid to the private sector since ratings indicated that neither policy contributed to a positive investment climate. [11]

Final components and weighting

The final list of components used to calculate the Provincial Investment Climate index, along with the relative weight given to each, is shown in table 5. Weights were determined by taking the average final scores from the survey respondents for each component and adjusting them so that they sum to 100.0.

Table 5: Components and their relative weights

Component	Weight (%)
1. Corporate income tax (CIT)	15.1
2. Fiscal prudence	14.9
3. Personal income tax (PIT)	14.9
4. Infrastructure	14.2
5. Corporate capital tax (CCT)	14.2
6. Flexible labour markets	13.4
7. Regulatory burden	13.3
Total	100.0

Sources: Karabegović, Clemens, and Godin, 2004; Clemens, 2002; The Fraser Institute, 2000, 2001; Clemens and Dixon, 1999; Dixon, Mihlar, and Clemens, 1998; calculations by the authors.

2 Provincial Investment Climate Index

This section of the study presents the scores and rankings for the Provincial Investment Climate Index as well as its components. The index reflects the extent to which the provinces have implemented policies highlighted by the IMS respondents as being important to the formation and maintenance of a positive investment climate.

The Provincial Investment Climate Index includes seven components: 1. Corporate income tax (CIT), 2. Fiscal prudence, 3. Personal income tax (PIT), 4. Infrastructure, 5. Corporate capital tax (CCT), 6. Flexible labour markets, and 7. Regulatory burden. [12] Each component contains multiple measures and there are, in total, 28 measures (table 6). [13] Each measure is scored on a scale from 0 to 10, where the top-performing province is scored at 10 while the lowest performing province is given a 0. The sub-component scores are weighted equally within each category. To estimate an overall index, the seven components were weighted according to the final scores the investment managers assigned to each component, as detailed on table 5. For further information on the methodology, please see Appendix A.

Table 6: Components of the Provincial Investment Climate Index

1. Corporate income tax (CIT)	5. Corporate capital tax (CCT)
A. General corporate income tax rate	A. CCT as a percentage of business profits
B. Tax preference for manufacturers and processors	B. CCT as a percentage of own-source revenues
	C. CCT as a percentage of GDP
2. Fiscal prudence	6. Flexible labour markets
A. Average deficit as a percentage of GDP	A. Pre-union representation clauses
B. Average government spending as a percentage of GDP	i. Secret ballot
C. Average annual change in spending as a percentage of GDP	1. Certification
D. Average debt service charges as a percentage of GDP	2. Decertification
	ii. Difference between certification and decertification application thresholds
	iii. Remedial certification
	iv. Mandatory union membership allowed
	v. Mandatory union dues allowed
3. Personal income tax (PIT)	B. Post-union representation clauses
A. Top marginal tax rate and threshold	i. Successor rights—existing collective agreement is binding
B. Middle marginal tax rate and threshold	ii. Technological change
	iii. Arbitration
	iv. Replacement workers
	v. Third-party picketing
4. Infrastructure	7. Regulatory burden
A. Road	A. Total cost of regulation as a percentage of GDP minus government activity
i. Total length of highway network per capita	
ii. Number of major truck border crossings	
B. Railroad (total length of first main railway track as a percentage of area)	
C. Seaport (total tonnage of goods shipped)	
D. Airport (total passengers enplaned and deplaned per capita)	

Provincial Investment Climate Index—overall results

Canada's two western provinces, Alberta and British Columbia, received the top rankings for the Provincial Investment Climate Index. Alberta ranked the highest with a score of 8.7 out of 10 and was clearly Canada's top province in terms of policies that encourage a positive investment climate (figure 2, table 7). British Columbia followed in second position with a score of 6.7 out of 10, indicating a significant gap between itself and Alberta. Ontario ranked third, just behind British Columbia with a score of 5.9.

It is important to note that only four provinces (Alberta, British Columbia, Ontario, and Manitoba) received scores in excess of 5.0. The remaining six provinces all received scores below 5.0 indicating rather poor performance in terms of generating a positive investment climate.

Saskatchewan and New Brunswick ranked fifth with a score of 4.8 out of 10, the highest score amongst the six provinces that failed to garner scores in excess of 5.0. Quebec had the lowest score (3.5 out of 10) and ranked last.

Table 7: Provincial Investment Climate Index, 2006 (scores and ranks out of 10)

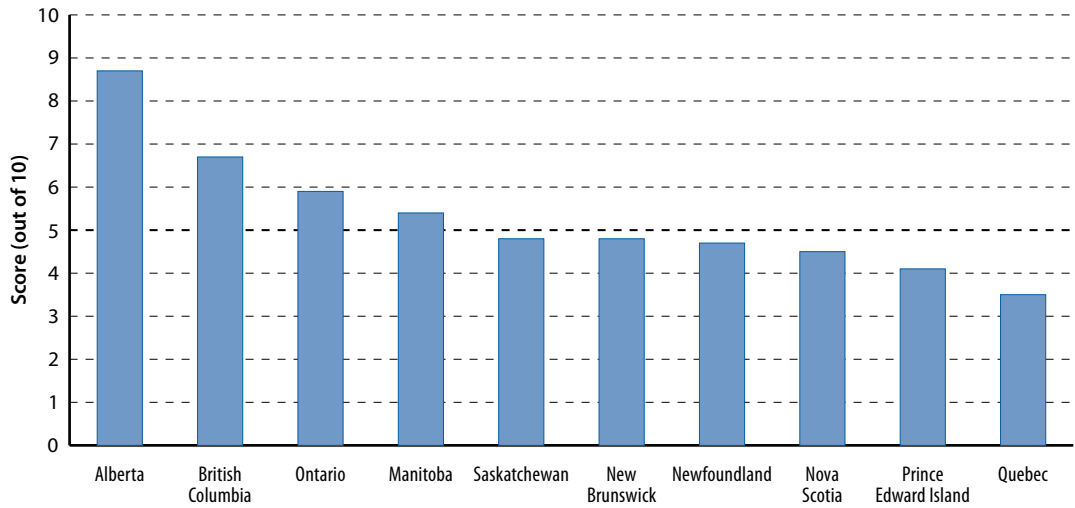
	Overall		Component 1 Corporate income tax		Component 2 Fiscal prudence	
	Score	Rank	Score	Rank	Score	Rank
Alberta	8.7	1	8.9	2	9.3	1
British Columbia	6.7	2	8.5	3	7.3	2
Ontario	5.9	3	7.1	5	5.4	5
Manitoba	5.4	4	6.8	6	5.8	4
Saskatchewan	4.8	5	3.1	9	6.6	3
New Brunswick	4.8	5	7.8	4	5.2	6
Newfoundland	4.7	7	2.1	10	4.0	8
Nova Scotia	4.5	8	5.7	7	4.6	7
Prince Edward Island	4.1	9	5.7	7	1.9	10
Quebec	3.5	10	10.0	1	2.5	9

Sources: The formula used to calculate each component may be found in Appendix A.

1. Corporate income tax

This component measures the degree to which provinces tax business profits in the form of corporate income taxes (figure 3, table 8). The corporate income tax component is composed of two measures: the general corporate income tax rate and the tax rate difference between the general corporate income tax rate and the preferential corporate income tax rate applied to manufacturers and processors measured as the percentage increase in business income tax rates from manufacturing to general tax rates. [14]

Figure 2: Provincial Investment Climate Index, 2006



Component 3 Personal income tax		Component 4 Infrastructure		Component 5 Corporate capital tax		Component 6 Flexible labour market		Component 7 Regulatory burden	
Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
10.0	1	5.9	3	10.0	1	7.0	1	10.0	1
8.3	2	6.7	1	8.8	4	3.0	7	3.6	7
4.5	6	6.3	2	6.4	6	5.0	2	6.4	5
5.0	4	4.7	6	4.5	8	3.1	6	7.8	3
7.5	3	5.9	3	0.4	10	2.5	8	7.8	3
4.8	5	3.9	8	6.8	5	2.5	8	2.1	9
1.5	10	3.5	9	9.6	2	4.0	3	9.1	2
2.5	8	5.1	5	6.2	7	3.6	5	4.0	6
3.5	7	1.8	10	9.0	3	4.0	3	3.0	8
2.5	8	4.3	7	2.5	9	1.9	10	0.0	10

Overall, Quebec received the highest score with a perfect 10.0. Alberta ranked second with a score of 8.9 out of 10. British Columbia followed closely with a score of 8.5 out of 10 and ranked third. An additional five provinces garnered scores in excess of 5.0: New Brunswick (7.8), Ontario (7.1), Manitoba (6.8), Nova Scotia (5.7), and Prince Edward Island (5.7). The remaining two provinces, Saskatchewan and Newfoundland, failed to receive a score above 5.0. Newfoundland had the dubious distinction of receiving the overall lowest score for corporate income tax at 2.1 out of 10.

Figure 3: Corporate income tax (CIT)

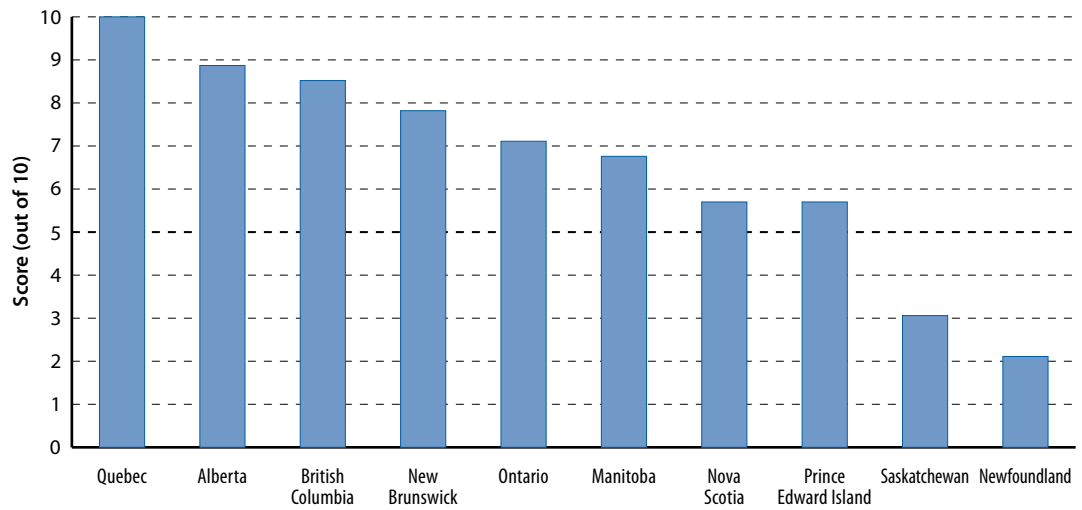


Table 8: Corporate income taxes (CIT) (scores and ranks out of 10)

	Corporate income tax		General corporate income tax rate		
	Score	Rank	Rate (2005)	Score	Rank
Quebec	10.0	1	9.9%	10.0	1
Alberta	8.9	2	11.5%	7.7	2
British Columbia	8.5	3	12.0%	7.0	3
New Brunswick	7.8	4	13.0%	5.6	4
Ontario	7.1	5	14.0%	4.2	5
Manitoba	6.8	6	14.5%	3.5	7
Nova Scotia	5.7	7	16.0%	1.4	8
Prince Edward Island	5.7	7	16.0%	1.4	8
Saskatchewan	3.1	9	17.0%	0.0	10
Newfoundland	2.1	10	14.0%	4.2	5

Note: The reported rates are effective for 2005, except the corporate income tax rates for Quebec
 Sources: Treff and Perry, 2005; Pricewaterhouse Coopers, 2005; British Columbia, Department of
 Manitoba, Department of Finance, 2005; Prince Edward Island, Department of Finance, 2005;

A. General corporate income tax rate

The general corporate income tax rate in each province is the statutory tax rate applied to business income. Quebec received the highest score for this measure of corporate income tax rates as it maintains the lowest statutory rate in the country at 9.9%. [15] Saskatchewan, on the other hand received the lowest score (0.0) for having the highest statutory corporate income tax rate in Canada at 17.0%. Only four provinces (Quebec, Alberta, British Columbia, and New Brunswick) received scores in excess of 5.0, indicating that the remaining six provinces maintain relatively high statutory business income tax rates.

B. Tax preference for manufacturers and processors

Some provinces maintain preferential corporate income tax rates for manufacturers and processors, which distorts the economic environment and the allocation of economic resources. The guiding principle for tax policy should be to minimize these distortions in order to maximize efficiency and productivity.

Eight of the ten provinces do not maintain a preferential corporate income tax rate for manufacturers and processors and thus receive a score of 10.0 out of 10. The remaining two provinces (Saskatchewan and Newfoundland) still maintain a preferential tax rate for manufacturing and processing. Newfoundland provides the greatest relief of the two provinces (5 percentage-points, which represents a 180.0% increase from the manufacturing to the general corporate income tax rate).

Rate (2005)	Preferential corporate income tax		
	Percentage increase in statutory business income-tax rates from manufacturing to general	Score	Rank
9.9%	0%	10.0	1
11.5%	0%	10.0	1
12.0%	0%	10.0	1
13.0%	0%	10.0	1
14.0%	0%	10.0	1
14.5%	0%	10.0	1
16.0%	0%	10.0	1
16.0%	0%	10.0	1
10.0%	70%	6.1	9
5.0%	180%	0.0	10

and Manitoba, which are effective as of January 1, 2006. Finance, 2005; Alberta, Department of Finance, 2005; Canada, Department of Finance, 2005; calculations by the authors.

2. Fiscal prudence

Fiscal prudence measures how well provinces have managed to keep their budgets balanced and whether or not provincial governments are spending in a sustainable manner (figure 4, table 9). This component of the Index evaluates provincial fiscal performance across four separate measures: average deficit as a percentage of gross domestic product (GDP), average government spending as a percentage of GDP, average annual change in spending as a percentage of GDP, and average debt service (interest) charges as a percentage of GDP. [16]

Overall, Alberta recorded the best fiscal prudence performance of any Canadian province with a score of 9.3 out of 10. [17] British Columbia ranked second with a score of 7.3. Four more provinces received a score above 5.0: Saskatchewan (6.6), Manitoba (5.8), Ontario (5.4), and New Brunswick (5.2). The remaining four provinces failed to receive scores above 5.0: Nova Scotia, Newfoundland, Quebec, and Prince Edward Island. Prince Edward Island received the lowest score (1.9) and ranked last.

A. Average deficit as a percentage of GDP

This subcomponent measures the average of budget deficits and surpluses between 2001/01 and 2004/05 as a share of GDP. All provinces maintaining average surpluses, regardless of the size, received a score of 10.0 while the lowest score was reserved for the province with the largest deficit. [18]

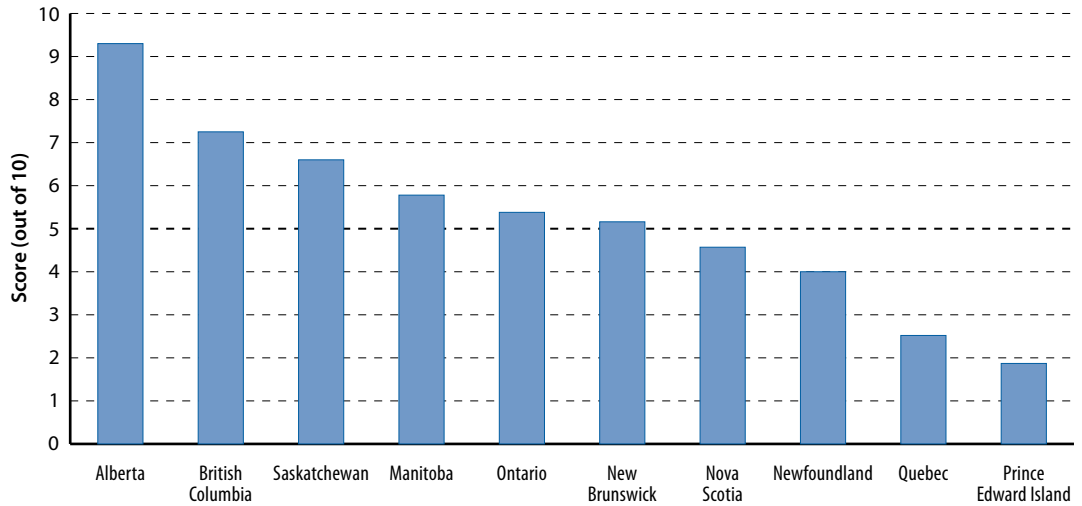
Table 9: Fiscal prudence (scores and ranks out of 10)

	Fiscal prudence		Five-year average net surplus (deficit) as a percentage of GDP [1]		
	Score	rank	%	Score	Rank
Alberta	9.3	1	2.4	10.0	1
British Columbia	7.3	2	(0.7)	6.8	7
Saskatchewan	6.6	3	0.2	10.0	1
Manitoba	5.8	4	0.4	10.0	1
Ontario	5.4	5	(0.7)	7.2	6
New Brunswick	5.2	6	(0.2)	9.3	5
Nova Scotia	4.6	7	(0.0)	9.9	4
Newfoundland	4.0	8	(1.9)	1.8	9
Quebec	2.5	9	(1.3)	4.6	8
Prince Edward island	1.9	10	(2.3)	0.0	10

Note 1: Provinces that generated surpluses over the period of analysis are treated as though they A province that registers an average surplus for the 2000-2004 term, it is automatically assigned a Note 2: Quebec's spending is adjusted for the federal tax abatement.

Note 3: From 2000 to 2004, Newfoundland experienced significant increases in nominal GDP (40.5%) Brunswick to 29.5% in Alberta. As a result, Newfoundland registered the lowest 5-year average provinces, it was removed from the score's calculation and received a score of 10. The scores and distribution of scores and rankings. If Newfoundland were considered in the score's calculation, the Sources: Statistics Canada, 2005b and 2005c; calculations by the authors.

Figure 4: Fiscal prudence



Three provinces maintained an average surplus over the time period, resulting in a perfect score of 10.0: Alberta (2.4% of GDP), Manitoba (0.4% of GDP), and Saskatchewan (0.2% of GDP). The other seven provinces all maintained an average deficit over the same time period. The average deficit varied from a low of 0.02% of GDP in Nova Scotia to a high of 2.33% of GDP in Prince Edward Island, which ranked last.

Five-year average spending as a percentage of GDP [2]			Five-year average annual change in spending as a percentage of GDP [3]			Five-year average cost of servicing debt as a percentage of GDP		
%	Score	Rank	%	Score	Rank	%	Score	Rank
19.1	10.0	1	(1.2)	7.2	6	0.6	10.0	1
26.3	5.5	3	(1.9)	10.0	1	1.9	6.7	2
29.0	3.8	4	(1.3)	7.6	5	2.6	4.9	4
30.1	3.2	6	(1.5)	8.7	3	4.0	1.2	8
22.7	7.7	2	0.7	0.0	10	2.0	6.6	3
31.0	2.6	8	(1.5)	8.7	3	4.5	0.0	10
29.8	3.4	5	(0.4)	4.5	7	4.3	0.5	9
32.0	2.0	9	(5.7)	10.0	1	3.6	2.2	6
30.8	2.7	7	0.6	0.6	9	3.6	2.2	6
35.2	0.0	10	(0.3)	4.1	8	3.2	3.4	5

balanced their budgets. This is done because, by definition, surplus money either is spent or reduces net debt. score of 10.

The rest of the provinces also registered increases, but they were not as high as Newfoundland; they ranged from 16.4% in New annual change in spending as a share of GDP. To ensure Newfoundland’s score does not distort scores of the other Canadian rankings for the remaining nine provinces were calculated considering just these provinces. This affords a more revealing remaining nine provinces would receive scores below 5.0 despite marked fiscal prudence in some provinces.

B. Average government spending as a percentage of GDP

The second subcomponent in fiscal prudence measures the size of provincial and local spending compared to the size of the economy over the same five-year period (2000/01-2004/05). [19]

Alberta received the highest score and ranked first on this measure with average government spending representing 19.1% of provincial GDP. Ontario ranked second with spending consuming 22.7% of GDP. British Columbia ranked third with government spending representing 26.3% of GDP. These three provinces were the only jurisdictions to receive scores in excess of 5.0. The remaining seven provinces all garnered scores below 5.0. Prince Edward Island had the highest share of government spending compared to the economy at 35.2%, ranking it last among the provinces.

C. Average annual change in spending as a percentage of GDP

This measure is linked with the previous in that it assesses annual changes in government spending (as a share of the economy) between 2000/01 and 2004/05. [20]

Newfoundland decreased its annual change in spending as a percentage of GDP by 5.7% over the past five years and received a score of 10. [21] British Columbia followed with a decrease of 1.9 in its annual change in spending as a share of the economy and also received a score of 10. Four additional provinces also received scores above 5.0: Manitoba (8.7), New Brunswick (8.7), Saskatchewan (7.6), and Alberta (7.2). The remaining four provinces all failed to receive scores in excess of 5.0. Ontario obtained the lowest score (0.0) and ranked last with an average annual increase in its spending of 0.7% of GDP between 2000/01 and 2004/05.

D. Average debt service charges as a percentage of GDP

Debt charges are annual costs required to service government debt. These charges act as a wedge between the amount of revenue a government extracts from the economy and the amount actually spent on government programs.

Alberta maintained the lowest debt charges as a share of GDP, on average, over the period from 2000/01 to 2004/05 with 0.6% of GDP allocated to debt servicing. British Columbia ranked second with a debt charge of 1.9% of GDP. Ontario followed in third with debt charges representing 2.0% of GDP. The remaining seven provinces all failed to receive scores (representative of performance) in excess of 5.0. New Brunswick had the dubious distinction of receiving the lowest score (0.0) and ranking last with debt servicing costs representing 4.5% of GDP.

3. Personal income tax (PIT)

This component measures the personal income tax burden based on both the applicable income tax rates as well as the level of income at which the various rates apply (figure 5, table 10). This component of the Index examines the top marginal personal income tax rate and the threshold at which it applies as well as the middle income tax rate and its threshold.

The three western Canadian provinces (British Columbia, Alberta, and Saskatchewan) dominate the overall scores and rankings for this component of the Provincial Investment Climate Index. Alberta ranks first with a perfect score of 10.0 primarily because of its single-rate tax structure for personal income tax. British Columbia ranked second with a score of 8.3 while Saskatchewan followed in third with a score of 7.5. Manitoba, the remaining western province, was the only other jurisdiction to receive a score at or above 5.0; it scored 5.0.

The other six provinces all received scores below 5.0. Newfoundland received the lowest score (1.5) and ranked last on this component of the Index.

A. Top marginal personal income tax rate and threshold

Western Canadian provinces dominate this measure, which combines the top personal income tax rate and the level of income at which it applies. Alberta ranks first with its single-rate personal income tax of 10.0%. Saskatchewan ranks second with a score of 7.5 and a top personal income tax rate of 15.0% that applies to income over \$105,056. British Columbia ranks third with a score of 7.0 out of 10 with a top personal income tax rate of 14.7% on income over \$92,185. Quebec and Newfoundland tie for last position, both with a score of 1.0. Quebec’s top personal income tax rate is 19.2% and applies to income over \$55,280 and Newfoundland’s top rate is 19.6% and applies to income over \$59,180.

2) Middle marginal personal income tax rate and threshold [22]

Western Canadian provinces again dominate this measure, which combines the middle personal income tax rate and the level of income at which it applies. Alberta ranks first with its single-rate personal income tax rate. British Columbia ranks second with a score of 9.5 and a middle average personal income tax rate of 11.5% that applies to income over \$58,357. Saskatchewan ranks third with a score of 7.5 out of 10 with a middle average personal income tax rate of 13.0% on income over \$36,770. Newfoundland receives the dubious distinction of ranking last (2.0 out of 10.0) with a middle personal income tax rate of 17.6% that applies to income over \$29,591.

Figure 5: Personal income tax (PIT)

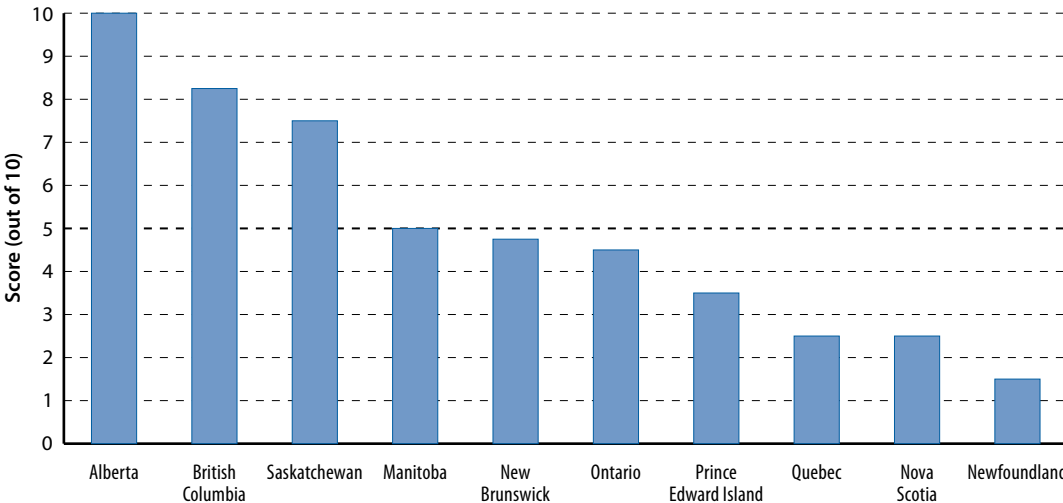


Table 10: Personal income taxes—tax rates, thresholds and scores and ranks (out of 10)

	Personal income tax		Top provincial tax rate and threshold			
	Score	Rank	Personal income tax rate 2005 [1]	Threshold at which rate applies (\$) [2]	Score	Rank
Alberta	10.0	1	10.0	n/a	10.0	1
British Columbia	8.3	2	14.7	92,185	7.0	3
Saskatchewan	7.5	3	15.0	105,056	7.5	2
Manitoba	5.0	4	17.4	65,000	3.5	5
New Brunswick	4.8	5	17.8	106,427	4.5	4
Ontario	4.5	6	17.4	69,643	3.5	5
Prince Edward Island	3.5	7	18.4	61,509	2.5	7
Quebec	2.5	8	19.2	55,280	1.0	9
Nova Scotia	2.5	8	19.3	93,000	2.0	8
Newfoundland	1.5	10	19.6	59,180	1.0	9

Note 1: It includes the surtax rate, when it is applicable. Quebec tax rate is adjusted for abatement.

Note 2: Alberta has a single tax rate thus the threshold does not apply.

Note 3: The middle personal income tax rate is defined as the rate between a jurisdiction's minimum the rates and thresholds are averaged. For example, in the case of British Columbia, with its five tax rate. This same definition applies for the middle provincial threshold.

Sources: Treff and Perry, 2005; Canada Revenue Agency, 2005; Pricewaterhouse Coopers, 2005;

4. Infrastructure

This component assesses the transportation infrastructure in each province. Infrastructure facilitates the flow of goods, services, and labour within and between jurisdictions. This component includes measures examining provincial road and railroad networks, as well as seaport [23] and airport capacity (figure 6, table 11).

Overall, British Columbia ranked first although it had a somewhat weak score of 6.7 out of 10. Ontario followed in second place with a score of 6.3. Saskatchewan and Alberta tied in third place with a score of 5.9. Nova Scotia was the only other jurisdiction to receive a score above 5.0; it scored 5.1.

The remaining five provinces failed to achieve scores in excess of 5.0. For instance, Manitoba ranked sixth overall with a score of 4.7 out of 10. Prince Edward Island ranked last with a score 1.8 out of 10.

There are two important notes to the overall analysis. First, there is considerable room for all of the provinces to improve with respect to infrastructure. Second, and perhaps more important, is that there are some geographic biases inherent in the infrastructure analysis. For example, smaller provinces may economize on airport costs by using proximate international and high-volume airports rather than developing their own airport system. Even with these caveats, however, the data included in this component broadly assesses the transportation infrastructure available in each of the provinces. [24]

Middle provincial tax rate and threshold

Personal income tax rate, 2005 [3]	Threshold at which rate applies (\$)	Score	Rank
10.0	n/a	10.0	1
11.5	58,357	9.5	2
13.0	36,770	7.5	3
14.0	30,545	6.5	4
15.7	49,098	5.0	6
14.3	34,010	5.5	5
15.2	30,755	4.5	7
15.2	27,636	4.0	8
17.4	44,386	3.0	9
17.6	29,591	2.0	10

and maximum rate. When there are several that fit this description, brackets, the middle three were averaged to produce a single middle

calculations by the authors.

Figure 6: Infrastructure

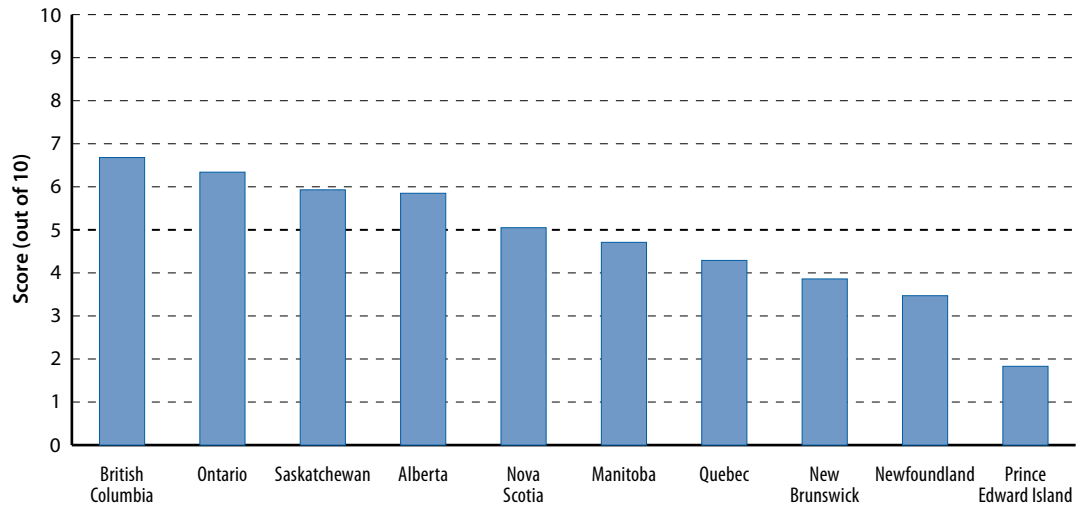


Table 11: Transportation Infrastructure—statistics and scores and ranks (out of 10)

	Infrastructure		Kilometres of highways per 1000 inhabitants	Score	Road		Score for roads	Rank for roads
	Score [1]	Rank			Number of major border crossings [2]	Score		
British Columbia	6.7	1	3.9	0.0	4	4.3	2.1	6
Ontario	6.3	2	4.1	0.1	8	10.0	5.1	2
Saskatchewan	5.9	3	33.4	10.0	1	0.0	5.0	3
Alberta	5.9	3	10.8	2.3	1	0.0	1.2	10
Nova Scotia	5.1	5	8.2	1.5	n/a	-	1.5	8
Manitoba	4.7	6	16.5	4.3	1	0.0	2.1	7
Quebec	4.3	7	4.1	0.1	4	4.3	2.2	5
New Brunswick	3.9	8	12.0	2.7	1	0.0	1.4	9
Newfoundland	3.5	9	13.5	3.2	n/a	-	3.2	4
Prince Edward Island	1.8	10	25.5	7.3	n/a	-	7.3	1

[1] Since Alberta, Saskatchewan, and Manitoba are land-locked provinces, their scores under this component were calculated computed from all four measures.

[2] Due to geography, Nova Scotia, Newfoundland, and Prince Edward Island were not ranked on this sub-component.

[3] Ratio between number of passengers enplaned and deplaned during a year and the total provincial population.

Sources: Transport Canada, 2003; Statistics Canada, 2003, 2004a, 2005a, 2005d, 2005e. Statistics Canada, Land and Freshwater Area,

A. Road

Two measures were used to assess the road capacity of the provinces: highway kilometres per capita [25] and the number of border truck crossings [26, 27]

In terms of highways per capita, Saskatchewan ranks the highest with 33.4 highway kilometres per 1000 inhabitants. Prince Edward Island ranks second with 25.5 kilometres per 1000 inhabitants and is the only other Canadian province to receive a score in excess of 5.0. British Columbia ranks last with 3.9 kilometres per 1000 inhabitants.

In relation to the numbers of major truck border crossings, Ontario ranks first with eight major border crossings. It is followed by Quebec and British Columbia with four border crossings between Canada and the United States. Alberta, Saskatchewan, Manitoba, and New Brunswick ranked last because each has just one major truck border crossing to the United States.

B. Railroad

Railroad capacity was measured by the length (kilometres) of the first main [28] railway track adjusted for the land area of each province.

The results for this measure indicate fairly good railway networks across the country with six of the ten provinces receiving scores in excess of 5.0. New Brunswick garnered the highest score (10.0) for its railway network. Saskatchewan ranked second with a score of 9.0 for its railway network. Prince Edward Island performed the worst on this measure due to the fact that it does not have a railway network. Of the nine provinces with railway networks, Newfoundland scored the poorest (0.8 out of 10).

Railroad			Seaport			Airport		
Kilometres of track per 1000 km ²	Score	Rank	International and domestic shipping (in thousand of tonnes)	Score	Rank (out of 7)	Number of passengers enplaned and deplaned [3]	Score	Rank
7.4	4.6	7	118,377	10.0	1	3.7	10.0	1
13.0	8.0	3	75,546	6.4	3	2.2	5.9	5
14.5	9.0	2	n/a	-	-	1.4	3.8	7
11.1	6.9	5	n/a	-	-	3.6	9.5	2
12.0	7.4	4	43,021	3.6	5	2.9	7.8	3
9.4	5.8	6	n/a	-	-	2.3	6.1	4
4.3	2.6	8	107,101	9.0	2	1.2	3.3	8
16.2	10.0	1	30,768	2.5	6	0.6	1.5	9
1.2	0.8	9	66,589	5.6	4	1.6	4.3	5
0.0	0.0	10	844	0.0	7	0.0	0.0	10

considering three measures: road and railroad networks, as well as airport capacity. For the other jurisdictions, the scoring was

<http://www40.statcan.ca/lo1/cst01/phys01.htm>; calculations by the authors.

C. Seaport

Seaport capacity was measured by the total tonnage of goods shipped by the province each year through its port system. It reflects the ease with which goods can reach domestic and international markets via waterways. [29]

British Columbia ranked first in total international and domestic goods shipped through its seaports with 118,377,000 tonnes of goods. Quebec followed closely in second place (107,101,000). Ontario ranked third with 75,546,000 tonnes of goods shipped. Considering only those provinces that have seaports, Prince Edward Island, New Brunswick, and Nova Scotia performed poorly in this component (table 11).

D. Airport

Airport capacity was measured by the number of passengers enplaned and deplaned yearly as a percentage of provincial population. [30]

British Columbia recorded the highest number of passengers per population (3.7), ranking it first among the provinces with a score of 10. Alberta ranked second with a score of 9.5 (3.6 passengers per population) and Nova Scotia ranked third with a score of 7.8 (2.9 passengers per population). Manitoba ranked fourth with a score of 6.1 (2.3 passengers per population).

All of the remaining six provinces received scores below 5.0, indicating a relatively low airport capacity as measured by population-adjusted passengers. Prince Edward Island earned the lowest score (0.0) for its airport passenger capacity.

5. Corporate capital tax

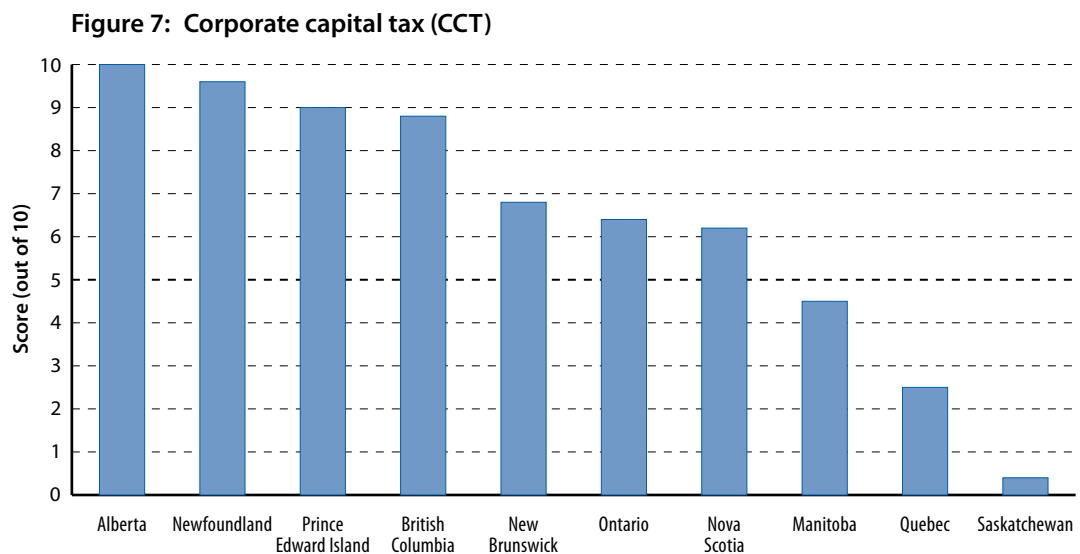
This component of the Index measures the use of corporate capital taxes in each province. Corporate capital taxes are a profit-insensitive tax essentially assessed on the value of a firm’s debt plus equity. [31] This component comprises three measures: corporate capital taxes as a percentage of business profits, corporate capital taxes as a percentage of own-source revenue, [32] and corporate capital taxes as a percentage of GDP (figure 7, table 12).

Overall, Alberta ranked first with the lowest use of corporate capital taxes among Canadian provinces (10.0 out of 10). It is the only province to have completely eliminated the use of such taxes. Newfoundland and Prince Edward Island rank second and third, respectively. British Columbia ranks fourth with a score of 8.8. Interestingly, British Columbia’s performance is largely explained by the fact that it eliminated the general corporate capital tax in 2001 while the performances of both Newfoundland and Prince Edward Island have far more to do with the lack of a capital base from which to extract revenues than it does to reducing the use of such taxes through rate reductions and threshold (eligibility) increases. [33] There are three provinces that scored poorly: Manitoba, Quebec and Saskatchewan. All are heavy users of corporate capital taxes. Saskatchewan received lowest score of 0.4, ranking it last among the provinces. [34]

A. Corporate capital tax as a percentage of business profits

This measure compares the amount of corporate capital tax paid with business profits.

Corporate capital taxes compared to business profits within a province range from a low of 0.0% in Alberta, which ranked first, to a high of 5.6% of business profits in Quebec, which ranked last. Seven provinces scored in excess of 5.0 with only Manitoba, Saskatchewan, and Quebec fairing poorly.



B. Corporate capital tax as a percentage of own-source revenues

This subcomponent measures the amount of corporate capital tax compared to the total amount of provincial revenues, excluding transfers from the federal government. It captures how dependent a jurisdiction is on corporate capital tax revenue to fund government activity.

Saskatchewan registers the highest reliance on corporate capital taxes: 5.2% of provincial own-source revenues are provided by corporate capital taxes. Quebec and Manitoba, the other two heavy users of corporate capital taxes only rely on it for 3.0% and 2.5%, respectively, of provincial revenues. Not surprisingly, Alberta ranks first as it is the only province that has completely eliminated the use of such taxes.

C. Corporate capital tax as a percentage of GDP

This subcomponent measures the amount of corporate capital tax as a percentage of gross domestic product (GDP). In other words, it measures the burden corporate capital taxes place on the economy.

Alberta recorded the lowest reliance on corporate capital taxes as compared to GDP among the ten provinces, receiving a score of 10.0. Saskatchewan had the highest total amount of corporate capital taxes as a percentage of GDP at 0.9% and ranked last. Quebec followed with a total amount of corporate capital taxes at 0.6% of GDP.

Table 12: Corporate capital tax (CCT)—rates and scores and ranks (out of 10)

	Corporate capital tax (CCT)		CCT as a percentage of business profits, 2004/05			CCT as a percentage of own-source revenues, 2004/05			CCT as a percentage of GDP, 2004/05		
	Score	Rank	%	Score	Rank	%	Score	Rank	%	Score	Rank
Alberta	10.0	1	0.0	10.0	1	0.0	10.0	1	0.0	10.0	1
Newfoundland	9.6	2	0.1	9.7	2	0.3	9.4	2	0.0	9.5	2
Prince Edward Island	9.0	3	0.7	8.7	3	0.4	9.2	3	0.1	9.2	3
British Columbia	8.8	4	0.9	8.5	4	0.5	9.0	4	0.1	9.0	4
New Brunswick	6.8	5	2.3	5.8	6	1.5	7.2	5	0.2	7.3	5
Ontario	6.4	6	2.1	6.2	5	2.1	6.0	7	0.3	7.0	6
Nova Scotia	6.2	7	2.7	5.2	7	1.8	6.6	6	0.3	6.9	7
Manitoba	4.5	8	4.0	2.8	8	2.5	5.3	8	0.4	5.4	8
Quebec	2.5	9	5.6	0.0	10	3.0	4.2	9	0.6	3.3	9
Saskatchewan	0.4	10	4.9	1.2	9	5.2	0.0	10	0.9	0.0	10

Sources: Statistics Canada, 2004b, 2005b, 2005c; British Columbia, Department of Finance, 2005; Pricewaterhouse Coopers, 2005; calculations by the authors.

6. Flexible labour markets

Flexible labour markets are assessed using differences in labour relations laws in Canada. [35] Labour relation laws regulate the interactions among unions, employees, and employers. Laws surrounding certification and decertification, union security, mandatory clauses, and labour disputes are key elements within labour relations laws (figure 8, table 13).

The flexible labour markets component is composed of two measures: pre-union representation clauses and post-union representation clauses. [36] Pre-union representation clauses cover aspects of the process through which a union acquires and loses its power to be the exclusive bargaining agent for a group of employees. They include whether or not secret ballot votes are required to certify or decertify a union, the difference between certification and decertification application thresholds, whether remedial certification power exists, and whether mandatory union membership and dues payment are permitted in collective agreements. Post-union representation clauses consider aspects of labour relation laws that apply to unionized firms. They include successor rights, technological change notice, arbitration, and the use of replacement workers and third-party picketing.

Alberta was one of only two provinces to receive a score of 5.0 or higher; it scored 7.0 out of 10.0, indicating that it had the most flexible labour relations laws in Canada. Ontario was second with a score of 5.0. Quebec, Saskatchewan, and New Brunswick maintained the most rigid labour relations laws in Canada. Quebec had the lowest score of 1.9 and ranked last. Saskatchewan and New Brunswick, with a score of 2.5 out of 10, were slightly higher.

A. Pre-union representation clauses

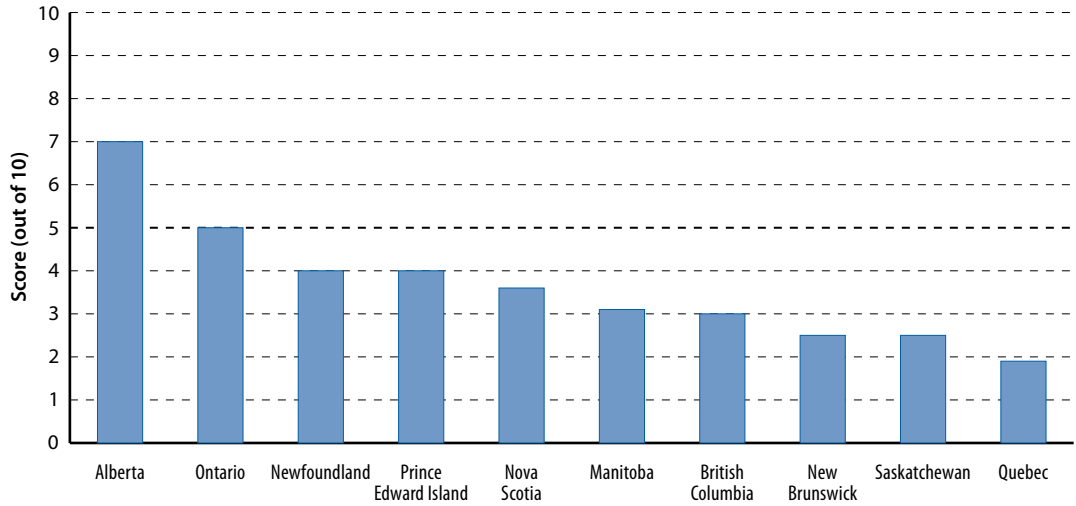
This subcomponent examines laws that pertain to how a union gains and loses the right to represent workers. Alberta and Ontario tie for the top position with a score of 6.0 out of 10.

Table 13: Flexible labour markets—scores and ranks (out of 10)

	Flexible labour markets		Pre-union representation clauses, 2004				
	Score	Rank	Mandatory secret ballot vote cert/decert score	Certification/decertification differential, percentage points score	Remedial certification score	Mandatory union membership allowed score	Mandatory union dues allowed score
Alberta	7.0	1	10.0	10.0	10.0	0.0	0.0
Ontario	5.0	2	10.0	10.0	10.0	0.0	0.0
Newfoundland	4.0	3	10.0	10.0	0.0	0.0	0.0
Prince Edward Island	4.0	3	0.0	10.0	10.0	0.0	0.0
Nova Scotia	3.6	5	10.0	6.0	0.0	0.0	0.0
Manitoba	3.1	6	5.0 [1]	6.0	0.0	0.0	0.0
British Columbia	3.0	7	10.0 [1]	10.0	0.0	0.0	0.0
New Brunswick	2.5	8	5.0 [1]	10.0	0.0	0.0	0.0
Saskatchewan	2.5	8	5.0 [1]	0.0	10.0	0.0	0.0
Quebec	1.9	10	5.0 [1]	4.0	10.0	0.0	0.0

Note 1: The legislation in Manitoba, New Brunswick, Saskatchewan, and Quebec requires mandatory secret ballot vote for Sources: Karabegovic et. al., 2004; calculations by the authors.

Figure 8: Flexible labour markets



They are the only two provinces to receive scores in excess of 5.0. The remaining eight provinces all received scores below 5.0. Manitoba received the lowest score of 2.2 on this measure.

There were five areas of pre-union representation clauses examined in this subcomponent: automatic certification (i.e., whether or not a secret ballot vote is mandatory), differences in certification/decertification thresholds, remedial certification, mandatory union membership, and mandatory union dues payment. The results for each are summarized below. [37]

Unions can be certified by either a secret ballot vote or automatically, based on a prescribed level of support. [38] Currently, British Columbia, Alberta, Ontario, Nova Scotia, and Newfoundland require a mandatory secret ballot vote to certify a union. The remaining five

		Post-union representation clauses, 2004						
Score	Rank	Successor rights-existing collective agreement is binding score	Technological change score	Arbitration score	Replacement workers score	Third-party picketing	Score	Rank
6.0	1	0.0	10.0	10.0	10.0	10.0	8.0	1
6.0	1	0.0	10.0	0.0	10.0	0.0	4.0	2
4.0	3	0.0	10.0	10.0	0.0	0.0	4.0	2
4.0	3	0.0	10.0	0.0	10.0	0.0	4.0	2
3.2	7	0.0	10.0	10.0	0.0	0.0	4.0	2
2.2	10	0.0	0.0	10.0	10.0	0.0	4.0	2
4.0	3	0.0	0.0	0.0	0.0	10.0	2.0	7
3.0	8	0.0	0.0	0.0	10.0	0.0	2.0	7
3.0	8	0.0	0.0	0.0	10.0	0.0	2.0	7
3.8	6	0.0	0.0	0.0	0.0	0.0	0.0	10

decertification but not for certification.

provinces (Saskatchewan, Manitoba, Quebec, New Brunswick, and Prince Edward Island) allow automatic certification if the level of support exceeds a specified threshold (table 13). [39]

The first step in a certification or decertification drive is to establish a given level of support of workers for the change. There are four provinces (Saskatchewan, Manitoba, Quebec, and Nova Scotia) that maintain a lower threshold for certification application than for decertification application. The remaining provinces have the same thresholds and requirements for certification and decertification.

Labour Relations Boards in five Canadian provinces (British Columbia, Manitoba, New Brunswick, Nova Scotia, and Newfoundland) have the power to certify a union automatically in the event an employer has been deemed to have committed an unfair labour practice (remedial certification). Alberta, Saskatchewan, Ontario, Quebec, and Prince Edward Island do not permit such remedial certification (table 13).

All Canadian provinces, in one way or another, permit clauses in collective agreements that require all workers to become members of a union and pay dues as a condition of employment.

B. Post-union representation clauses

This area evaluates aspects of labour relations laws that apply once a union has been installed as the collective representative for workers. Alberta received the highest score (8.0) and ranked first in this area of labour relations laws. The remaining nine provinces all scored below 5.0. Specifically, five provinces (Ontario, Newfoundland, Prince Edward Island, Nova Scotia, and Manitoba) received scores of 4.0 while three provinces (British Columbia, New Brunswick, and Saskatchewan) received scores of 2.0. Quebec ranked last with a score of 0.0.

Five areas of post-union representation labour relations laws were analyzed: successor rights, technological change, arbitration, the use of replacement workers, and third-party (or second-site) picketing. The results for each are summarized below.

All ten provinces maintain successor rights laws wherein existing collective agreements are made binding on new owners when a business, in whole or in part, is sold, transferred, leased, merged, or otherwise disposed of. Five provinces (British Columbia, Saskatchewan, Manitoba, Quebec, and New Brunswick) require employers to notify unions in advance when proposed technological change may affect either the collective agreement or employment. Immediate, binding arbitration, pertaining to disputes regarding collective agreement, its meaning, application, and alleged violations, is prescribed in six provinces (British Columbia, Saskatchewan, Ontario, Quebec, New Brunswick, and Prince Edward Island). This requirement does not offer parties a choice to use other mechanisms such as mediation or other less formal dispute resolution procedures first.

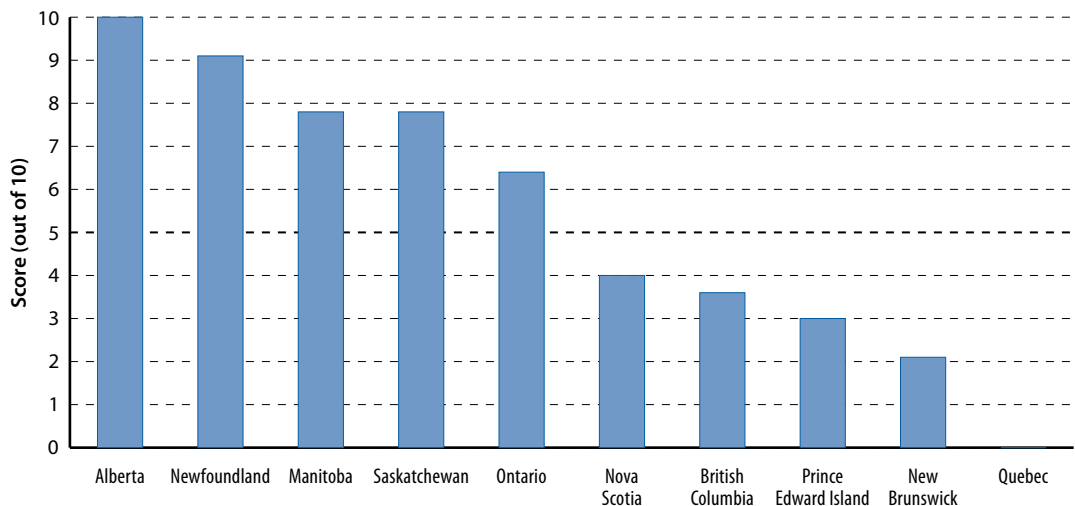
Four provinces (Alberta, Prince Edward Island, Manitoba, and Saskatchewan) have legislation allowing replacement workers during legal strikes and lockouts. Ontario and New Brunswick generally allow replacement workers even though they do not have such provision in their Labour Code. British Columbia and Quebec explicitly prohibit the hiring of replacement workers while Nova Scotia and Newfoundland do not have specific provisions in their laws but rely rather on federal precedents. [40] Third-party picketing is specifically prohibited in only two provinces, British Columbia and Alberta. The remaining eight provinces do not address third-party picketing and, therefore, regulation is achieved through court precedent.

7. Regulatory burden

Regulatory burden measures the cost of government regulations, often referred to as “red tape.” The cost of regulation as a percentage of GDP minus government activity is the measure used in this study to assess the regulatory burden (figure 9, table 14). [41] Please note that the regulatory costs were collected, analyzed, and reported by the Canadian Federation of Independent Business (CFIB) in a recent report (Jones et al., 2005). [42]

The overall results are quite striking. Alberta ranked first (score of 10.0) with regulatory costs representing 2.6% of GDP. Newfoundland followed in second position with a score of 9.1 out of 10 while Manitoba and Saskatchewan tied for third place with a score of 7.8. Quebec ranked last with regulatory costs representing an alarming 4.5% of GDP. New Brunswick was slightly less at 4.1% of GDP, although the level is still disconcerting.

Figure 9: Regulatory burden



Source: Jones, et al., 2005; calculations by the authors.

Table 14: Regulatory burden—scores and ranks (out of 10)

	Regulatory burden Score	Regulatory burden Rank	Total cost of regulation as percentage of GDP minus government activity, 2004
Alberta	10.0	1	2.6
Newfoundland	9.1	2	2.7
Manitoba	7.8	3	3.0
Saskatchewan	7.8	3	3.0
Ontario	6.4	5	3.2
Nova Scotia	4.0	6	3.7
British Columbia	3.6	7	3.8
Prince Edward Island	3.0	8	3.9
New Brunswick	2.1	9	4.1
Quebec	0.0	10	4.5

Sources: Jones et al., 2005; Statistics Canada, 2005a, 2004b; Statistics Canada, 2005e; calculations by the authors.

3 Comparing the Provincial Investment Climate Index and the Investment Manager Survey, 2004

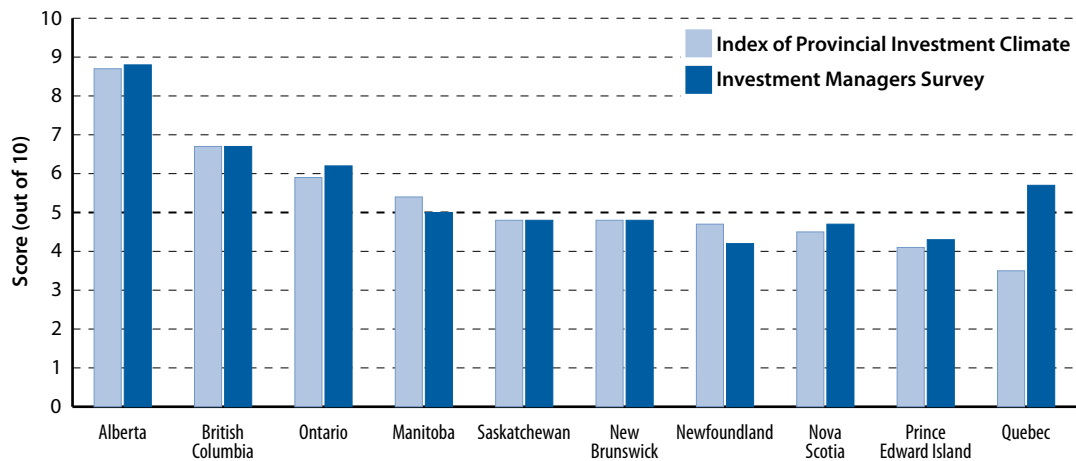
The two sets of ratings obtained from the Provincial Investment Climate Index and the Investment Manager Survey are quite similar. [43] For instance, the Index reveals that Alberta, British Columbia, and Ontario are the three provinces with the most favourable investment climate in Canada. These results parallel those received in the 2004 IMS exactly (figure 10).

The most noticeable difference between the results obtained by the Index and the Investment Manager Survey relates to the provinces of Quebec and Newfoundland. According to the Index, which relies on empirical evidence, Quebec is the least attractive province with the worst investment climate in Canada. According to the survey respondents, however, Quebec was ranked fourth best in Canada in terms of its investment climate in the most recent survey. Similarly, Newfoundland was considered by survey respondents to have the least favourable investment climate in Canada; however, according to the Index, Newfoundland ranks seventh.

“Home Bias” could explain these noticeable differences. According to this theory, one explanation for bias is information asymmetry between domestic and foreign investors regarding the economic performance of domestic firms (Coval, 1999). This asymmetry influences investors’ decisions towards geographic areas for which they have more information. For example, investors may have access to information about local companies and thus would prefer to invest in local firms rather than in distant ones for which they have less information. There may also be differences in the awareness of potential investment locations. For instance, it may be that the investment industry has a greater awareness of the opportunities and potential in Quebec than it has of those in Newfoundland.

Finally, risk may be another factor explaining the differences as investors prefer to deal with familiar situations [44] and the reputation of the location in other markets (provincial and international) plays an important role for investment decisions. For instance, Atlantic Canada has gained a reputation as an unattractive location for business investment and this may have had an impact upon investment managers’ perception of Newfoundland.

Figure 10: Provincial Investment Climate Index and the 2004 Investment Managers Survey



Sources: Karabegović, Clemens, and Godin, 2004; calculations by the authors.

Conclusions and recommendations

The Provincial Investment Climate Index is a quantifiable measure that documents public policies that contribute to and sustain positive investment climates. These public policies were identified by investment managers in surveys conducted over a seven-year period, from 1998 to 2004, by The Fraser Institute.

Overall, the results indicate that all provinces have, to varying degrees, room to improve their public policies in order to attract investors to their jurisdictions. Public policies that contribute to positive investment climates are those that encourage productive economic activities: competitive tax rates (personal and business), adequate infrastructure, prudent fiscal policies on the part of government, labour laws that promote flexibility, and appropriate regulations.

Canada's western provinces dominate the top of the overall index. Alberta is the top province in terms of public policies that sustain a positive investment climate. There is a large gap between Alberta and British Columbia, which ranked second. Ontario ranked third.

Unfortunately, six of the ten provinces (Saskatchewan, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Quebec) failed to receive scores above 5.0. In addition, Manitoba received a score that narrowly exceeded 5.0. Equally as worrying is that Quebec, one of the most populated Canadian provinces, performed poorly. According to the Index, Quebec had the most unfavourable investment climate in all Canada (score of 3.5).

Comparing the two sets of ratings obtained from the Provincial Investment Climate Index and the IMS, final results are similar. The most noticeable difference relates to the provinces of Quebec and Newfoundland. Home bias, awareness of potential investment locations, and risk explain some of these differences.

Appendix A: Methodology

The Provincial Investment Climate Index is based on seven components: Corporate income tax, Fiscal prudence, Personal income tax, Infrastructure, Corporate Capital Tax, Flexible labour markets, and Regulatory burden. Investment climates are measured using the most recent data available: Corporate income tax (2006), Fiscal prudence (2000/01–2004/05), Personal income tax (2005), Infrastructure (2003), Corporate capital tax (2004/05), Flexible labour markets (2004), and Regulatory burden (2005). Five-year averages have been employed to balance the need for historical and current performance in certain areas. [45]

Each component contains multiple measures. In total, the seven components include 28 separate measures. [46] Each measure in the Index is scored on a scale from 0 to 10, where the top-performing province is scored at 10 while the lowest-performing province is given a 0 (zero). All measures are equally weighted within each component. To estimate an overall Index, the seven components were weighted according to the final scores the investment managers assigned to each component, as detailed on table 5.

For all the measures, except those in the Flexible labour markets and Personal income tax components, each observation was transformed into a number from zero to 10 using the following formula if a higher number is indicative of a worse performance: $(V_{\max} - V_i) / (V_{\max} - V_{\min}) \times 10$, where V_{\max} is the largest value found within a variable, V_{\min} is the smallest, and V_i is the observation to be transformed. The inverse formula is used where a higher number is indicative of better performance. [47]

The measures included under Flexible labour markets relied primarily on bi-modal scoring. [48] The following fall in this category.

Remedial certification: A jurisdiction gets a score of zero, if the legislation gives the Labour Relations Board the power to certify a union without a mandatory vote; otherwise, it gets a score of 10.

Secret ballot: If the legislation requires a mandatory vote for certification and decertification, a jurisdiction gets a score of 10. If the legislation requires a mandatory vote for either certification or decertification, a jurisdiction gets a score of 5; otherwise, it gets a score of zero.

Mandatory union membership allowed: If the legislation allows a union and employer to include a clause in their collective agreement that requires membership in a union as a condition of employment, a jurisdiction gets a score of zero; otherwise, it gets a score of 10.

Mandatory union dues allowed: If the legislation requires or allows mandatory payment of dues by those employees who are not members of a union, a jurisdiction gets a score of zero; otherwise, it gets a score of 10.

Successor rights: If, in general, a new employer is bound by the existing collective agreement, a jurisdiction gets a score of zero; otherwise, it gets 10.

Technological change: If the legislation requires an employer to inform in advance the union (or the Minister of Labour) about any technological change, a jurisdiction gets a score of zero; otherwise, it gets a score of 10.

Arbitration: If the legislation has an intermediate step between procedures in the collective agreement for dealing with disputes (regarding collective agreement, its meaning, applica-

tion, and alleged violations) and binding arbitration, a jurisdiction gets a score of 10, otherwise, it gets zero.

Replacement workers: If the legislation allows an employer to hire replacement workers during a legal strike or lockout, a jurisdiction gets a score of 10; otherwise, it gets zero.

Third-party picketing: If the legislation allows striking employees to picket businesses other than their own employer, a jurisdiction gets a score of zero; otherwise, it gets 10.

Calculating the Personal income tax component was more complicated. The measures examining marginal income tax rates and the income thresholds at which they apply were transformed into a score from zero to 10 using matrix 1 and matrix 2. [49] Matrix 1 is used in calculating the score for the top provincial income tax rate and the income threshold at which it applies. Matrix 2 is used to calculate the score for the middle provincial income tax rate and the income threshold at which it applies. [50] In order to understand how the scores are assigned, this example. In matrix 2, a jurisdiction gets a score of 2.5 if it has an income tax rate between, say, 16% and 17% for incomes between \$10,000 and \$20,000. If this province decides to increase its income tax rate to 17.5%, it will receive a score of 1.5 out of 10.

Matrix 1: Scoring income tax for the top provincial bracket

Top Provincial Tax Rate	Income threshold level					
	Less than \$20,000	\$20,000 to \$40,000	\$40,000 to \$60,000	\$60,000 to \$80,000	\$80,000 to \$100,000	More than \$100,000
11% or less	9	9.5	10	10	10	10
11% to 12%	8	8.5	9	9.5	10	10
12% to 13%	7	7.5	8	8.5	9	9.5
13% to 14%	6	6.5	7	7.5	8	8.5
14% to 15%	5	5.5	6	6.5	7	7.5
15% to 16%	4	4.5	5	5.5	6	6.5
16% to 17%	3	3.5	4	4.5	5	5.5
17% to 18%	2	2.5	3	3.5	4	4.5
18% to 19%	1	1.5	2	2.5	3	3.5
19% or more	0	0	1	1.5	2	2.5

Matrix 2: Scoring income tax for the middle provincial bracket

Top Provincial Tax Rate	Income threshold level					
	Less than \$10,000	\$10,000 to \$20,000	\$20,000 to \$30,000	\$30,000 to \$40,000	\$40,000 to \$50,000	More than \$50,000
11% or less	8	8.5	9	9.5	10	10
11% to 12%	7	7.5	8	8.5	9	9.5
12% to 13%	6	6.5	7	7.5	8	8.5
13% to 14%	5	5.5	6	6.5	7	7.5
14% to 15%	4	4.5	5	5.5	6	6.5
15% to 16%	3	3.5	4	4.5	5	5.5
16% to 17%	2	2.5	3	3.5	4	4.5
17% to 18%	1	1.5	2	2.5	3	3.5
18% to 19%	0	1	1	1.5	2	2.5

Appendix B: Review of scholarly research on each component

1. Taxes (personal income, corporate income, and corporate capital) [51]

Most economists agree that people respond to incentives. That is, people make decisions by comparing the costs and benefits of a particular action and when either the costs or benefits change, people's behaviour also changes. A critical question related to incentives is whether or not taxes distort people's incentives. In other words, do taxes change people's behaviour in regards to investment, risk-taking, and innovation?

When deciding whether to work an additional hour or invest an additional dollar, the most important tax rate is the marginal tax rate. [52] It matters most because it directly affects the proportion of increased income that is left after taxes. For an investor, the marginal tax rate indicates the additional taxes to be paid for an additional dollar earned through investment. The economic literature suggests that high marginal tax rates, whether in the form of personal income, corporate income, or corporate capital taxes, have a profound effect on entrepreneurial activity and investment.

Hall and Jorgenson (1967) wrote one of the most influential studies on the relationship between business tax policy and investment. The authors estimate the effects of changes in tax policy on investment behaviour for three major tax revisions in the postwar period in the United States. [53] Their findings suggest that tax policy is highly effective in changing the level and timing of investment expenditures.

Carroll et al. (1998) investigate the effects of entrepreneurs' personal income tax situations on their capital investment decisions. Using income tax returns of a sample of sole proprietors before and after the US Tax Reform Act of 1986, they find that income taxes exert a statistically and quantitatively significant influence on investment decisions. Their results show that "a 5 percentage point rise in marginal tax rates would reduce the proportion of entrepreneurs who make new capital investment by 10.4%. Further, such a tax increase would lower mean capital outlays by 9.9%" (1998: 2).

2. Infrastructure

A highly developed transportation network, such as highways and airports can bolster a firm's productivity by providing an unpaid direct input (transportation services) and lowering the costs of existing inputs (Jiang, 2001). Many studies have investigated the rate of return of transportation infrastructure on productivity and economic growth.

The seminal work of Aschauer (1989) explores the relationship between public infrastructure capital and total factor productivity. He found that a 1% increase in core infrastructure, which included highways, mass transit, airports, sewers, and water systems, increases output in the private sector by 0.24%. Munnell (1990), using a similar definition of core infrastructure, corroborates this highly positive effect on output.

Harchaoui and Tarkhani (2003), using a panel dataset of 37 Canadian industries over a 40-year period, found that public capital contributed about 18% of overall business sector multifactor productivity growth over the period from 1961 to 2000. They also estimated that the elasticity of output with respect to public capital at the aggregate level was about 0.066. Their approach also allowed them to estimate the industry specific benefits to each of the 37 industries from increased public infrastructure. For instance, for the Canadian business sector, the marginal benefit associated with public infrastructure capital is about 0.17. In other words, a \$1.00 increase in the net capital stock generates 17 cents of cost-saving producer benefits per year.

3. Fiscal prudence

Economists are divided on the effects and desirability of fiscal deficits. The classical view holds that deficits may raise interest rates (and thus the cost of capital) by increasing the demand for loanable funds. Higher interest rates lead to a reduction in (or “crowding out” of) investment or net exports (or both), thus lowering national income in the long-run (Ball and Mankiw, 1995). Many studies have found a positive relationship between deficits and long-run interest rates (Feldstein, 1986; Hoelscher, 1986). For example, Feldstein (1986) determined that each percentage point increase in the five-year projected ratio of budget deficits to gross national product (GNP) raises the long-term government bond rate by approximately 1.2 percentage points. Moreover, Eric Engen and Glenn Hubbard (2004) conclude that an increase in government debt equivalent to 1% of gross domestic product (GDP) would increase the long-term real interest rate by about three basis points.

By contrast, other research has found that no significant relationship exists between deficits and interest rates (Hoelscher, 1983; McMillin, 1986; Evans, 1987; Barro, 1989). The empirical findings of Barro, for instance, suggest that households view deficits as an implicit future tax. Accordingly, households will offset a rise in government debt by raising their own level of private savings, thereby mitigating any effect on interest rates.

4. Labour market flexibility

Labour markets are an essential component to a functioning economy because they provide the mechanism through which society allocates one of its most important sources of capital—human capital. In order to achieve an efficient and high-performing labour market, wages and the mix of labour and capital must be allowed to adjust to changes in market conditions. Flexible labour markets facilitate this process, producing high rates of job creation and improved productivity: employees are able to shift their efforts to endeavours that generate the greatest return to them while employers invest and focus on ventures that maximize profits.

There are a great number of studies supporting the argument that labour flexibility leads to stronger economic growth. The main study among these was completed by the

Organisation for Economic Cooperation and Development (OECD) in 1994; it is commonly referred to as the *Jobs Study*. It concluded that countries with more flexible labour markets not only enjoyed better records for job creation, but also experienced faster economic growth. A number of studies support the OECD's conclusions. For instance, Besley and Burgess (2004), in examining the manufacturing sector in India between 1958 and 1992, determined that labour-relation laws that favoured one group over another led to lower output, employment, investment, and productivity.

Regulations that contribute to inflexible labour laws are often characterized by unionization. [54] Hirsch (1997) noted that unions tend to increase wages, reduce profitability, and reduce investment in physical capital and research and development. Hirsch describes the wage premium as a tax on capital, which effectively lowers the net rate of return on investment. Fallick and Hassett (1999) determined that the unionization of a firm has the same effect, over a one-year period, as raising the corporate tax rate by 33 percentage points. Lastly, Metcalf (2003) compared the productivity of unionized labour in the United States, Canada, United Kingdom, Japan, Germany, and Australia. He found that unionization reduced investment by one fifth compared with the investment rate in a non-union workplace for North America and parts of Europe.

5. Regulatory burden

Regulations impose costs on businesses through a variety of channels: restricting a firm's ability to expand operations, limiting allowable rates of return, and imposing barriers to entry and high compliance costs. Consumers are likewise affected, either through higher prices, fewer innovative products, lower wages, lost time, and fewer choices.

In Canada, it is estimated that complying with regulation in 1996 exceeded \$83 billion, or about \$11,000 per family (Mihlar, 1998: 3). South of the border, the total cost of US federal regulation alone is approximately US\$500 billion a year (Niskanen, 2001: 389). Weidenbaum and DeFina (1976) estimated that, for every \$1 that government spends to administer regulation, the private sector spends about \$20 to comply. The works of Moore (1995), Regulatory Affairs Directorate (1996), and Douglass et al. (1997) support this result.

Studies examining OECD data find that strict product market regulation lowers productivity growth and investment (Nicoletti and Scarpetta, 2003; Alesina et al., 2003). In fact, Alesina et al. found that long-run differences in investment rates between some European countries and the United States can be largely attributable to differences in regulatory burden.

Conclusion

The economic literature on the significance of these policies is consistent with the views of the investment managers. The components highlighted have a powerful, positive effect on many outcomes favourable to the establishment of a strong investment climate: economic growth, investment, profitability, and employment.

Notes

- 1 The authors readily acknowledge that there are other factors that influence investment climates, such as local market characteristics and path dependency. This study, however, is limited to the examination of public policies that have an impact in the provincial investment climate.
- 2 There was no survey completed in 2003.
- 3 The IMS was issued quarterly until the end of 2000, when it was done on an annual basis.
- 4 For information on past IMS reports, see Karabegović, Clemens, and Godin (2004); Clemens (2002), The Fraser Institute (2000, 2001); Clemens and Dixon (1999); and, Dixon, Mihlar, and Clemens (1998).
- 5 The exception was 2003, when there was no survey.
- 6 The 2000 survey also received 51 responses from investment managers based in the United States, with a total value of US\$430 billion in assets.
- 7 Data on the nature of firms responding was not available for the 1998 and 1999 surveys.
- 8 The 1998 and 1999 IMS Surveys were not included in this analysis because the policy areas considered in those surveys did not match up with the areas considered in the surveys from 2000 to 2004. The 1998 and 1999 surveys considered only five policy areas that are broader in definition than those of the 2000 to 2004 surveys: deficit reduction, national unity/Quebec referendum, social policy, tax reform/high taxes, and unemployment. The results from the 1998 and 1999 surveys generally support the findings from the 2000 to 2004 surveys.
- 9 It is not clear whether scores are perfectly analogous from one year to the next. That is, there may be a difference between a score of 7 in a survey issued in one year compared to a score of 7 in another. Over the course of the survey period, however, the rankings and values given to each component showed very little variance.
- 10 Data for the fiscal prudence component was only available in the 2004 survey.
- 11 These policies have high opportunity costs given that they have little or no effect on investment climates. That is, rather than contribute to the formation of a positive investment climate, they impede the pursuit of more effective government policy, such as the lowering of tax rates.
- 12 The influence of Crown Corporations in the provincial investment climate is not included in this analysis. The authors acknowledge, however, that the presence of Crown Corporations could be a discouraging influence on private sector firms. For a thorough discussion of the theoretical and empirical evidence on the relative performance of state-owned versus privately-owned firms, the types of privatization, if and by how much privatization has improved the performance of former state-owned enterprises, how investors in privatizations have fared, and the impact of privatization on the development of capital markets and corporate governance, please see Megginson and Netter, 2001.
- 13 Please see Appendix B for a summary of some of the scholarly research on the economic importance of each of the seven components used in the study.
- 14 Small businesses in every province except Quebec enjoy a preferential corporate income tax rate, which introduces artificial preferences or biases in the marketplace that can pose

serious problems (Clemens and Veldhuis, 2005). An area of further research is to include the corporate income tax difference between the general and the small business rate as an additional measure to evaluate this component. The main problem that arises when this measure is included in the evaluation is that provinces with higher general tax rates and small differences between its general and small business tax rates could perform better overall than provinces with lower general tax rates and large differences between these tax rates. For a thorough discussion of the economics associated with a preferential rate for small business, please see Clemens and Veldhuis, 2005.

- 15 Note that Quebec increased its general corporate income tax rate to 9.9% (effective January 1, 2006) from 8.9%. It is expected that the general corporate income tax rate will be increased to 11.9% by 2009.
- 16 The information used is consolidated data, which includes provincial and local government, as well as education, health, and social services institutions. For a complete definition, please see Statistics Canada, 2004b.
- 17 Note that unlike the previous components, these measures cover a five-year period beginning in 2000/01 through to 2004/05 to smooth year-to-year variations.
- 18 Scores are calculated using a min-max formula and thus are relative. To avoid awarding provinces for larger surpluses and penalizing provinces for small surpluses, each province receives a score of 10.0 regardless of the size of their surplus.
- 19 Quebec's spending is adjusted for the federal tax abatement.
- 20 See note 19 regarding Quebec's spending.
- 21 From 2000 to 2004, Newfoundland experienced significant increases in nominal GDP (40.5%). In the remaining provinces, the increase in nominal GDP ranged from 16.4% in New Brunswick to 29.5% in Alberta. As a result, Newfoundland registered the lowest 5-year average annual change in spending as a share of GDP. To ensure Newfoundland's score does not distort scores of the other Canadian provinces, it was removed from the score's calculation and received a score of 10. The scores and rankings for the remaining nine provinces were calculated considering just these provinces. This affords a more revealing distribution of scores and rankings. If Newfoundland were considered in the score's calculation, the remaining nine provinces would receive scores below 5.0 despite some provinces experiencing marked fiscal prudence.
- 22 The middle personal income tax rate is defined as the rate between a jurisdiction's minimum and maximum rate. The same definition applies for the middle provincial threshold. When there are several that fit this description, the rates and thresholds are averaged. For example, in the case of British Columbia, which has five personal income tax brackets, the middle three were averaged to produce a single middle rate and threshold.
- 23 Since Alberta, Saskatchewan, and Manitoba are land-locked provinces, their scores for this component were calculated considering just three measures: road and railroad networks, and airport capacity. For the other jurisdictions, the scores were calculated using all four measures.
- 24 Pursuant to a request from one of the formal peer reviewers and considering that there are some geographic biases that could influence results, the Provincial Investment Climate Index was also calculated excluding this component. The results are similar to the ones obtained including the Infrastructure component. Excluding the Infrastructure component,

Alberta and British Columbia still received the top rankings. Alberta ranked the highest with a score of 9.2 out of 10. British Columbia followed in second with a score of 6.7 out of 10. Ontario ranked third with a score of 5.8. Again, six provinces received scores below 5.0. The difference between the two approaches were changes in the rankings for the Atlantic provinces of Newfoundland, Prince Edward Island, and Nova Scotia.

- 25 Freeways, primary highways, and secondary highways, as defined by Transportation Canada were included in this measure.
- 26 A major border crossing was defined as one through which 100,000 or more trucks traverse each year.
- 27 Due to geographical reasons and in order not to penalize those provinces that do not border on the United States, Newfoundland, Prince Edward Island, and Nova Scotia were not ranked on the number of border crossings. Their road-network capacity score was calculated using just the highway kilometres per capita.
- 28 The first main railway track is defined as the amount of track that a train would have to use in order to get from one destination to another along the system. Excluded from this measure are passing tracks, double track, and yard track.
- 29 Alberta, Saskatchewan, and Manitoba were excluded from this measure since they are land-locked provinces. See notes 23 and 24 for further information.
- 30 One may argue that the availability of international airports and the number of international passengers would be an important variable to be included. However, there is concern about the available data mainly because information about deplaned and enplaned passengers in some cities could include transit passengers and these could “inflate” the real number of actual passengers that choose a particular airport as a final destination. These also could lead to double counting of passengers.
- 31 For a more thorough discussion of corporate capital taxes in Canada, please see Clemens, Emes, and Scott, 2002.
- 32 A province’s own-source revenues are those funds that it obtains through its own taxing powers rather than transfers received from the federal government.
- 33 Initially the corporate capital tax rates for non-financial institutions were considered as a measure for this component; however, it was noticed that there were substantial differences between financial and non-financial tax rates. This could mean that many provinces that lack a capital base raise corporate taxes primarily through financial institutions.
- 34 An area of further research is to investigate a possible link between high reliance on corporate capital taxes and the importance of Crown Corporations in a province.
- 35 The evaluation of labour relations laws analyzes the laws as written, not the interpretation or enforcement of such laws. Therefore, it is possible for two provinces with very similar labour laws to be rated equally in each component even though their labour markets perform differently due to different interpretations or levels of enforcement.
- 36 The data used to evaluate this component comes from Karabegović et al., 2004. Please note, however, that there the Index of Flexibility in Labour Relations Laws is calculated considering four areas: Certification and Decertification, Union Security, Mandatory Clauses, and Labour Disputes. In our analysis, the data is grouped differently (two measures) and, for this reason, final results are different from those in Karabegović et al., 2004.
- 37 For more detailed information, please see Karabegović et al., 2004.

- 38 For more information on the importance of mandatory voting, certification and decertification rules, mandatory membership and dues payment in terms of explaining unionization rates, please see Clemens et al., 2005.
- 39 Interestingly, all provinces except Prince Edward Island require mandatory secret ballot vote to decertify a union.
- 40 For further details, see Karabegović et al., 2004.
- 41 Consolidated provincial-local government expenditures are used to measure government activity.
- 42 The cost of regulation was estimated using data compiled through a survey of members of the Canadian Federation of Independent Business (CFIB), mainly small businesses. The results were then extrapolated to account for large businesses. Although the methodology employed to obtain the total cost of regulation by province could be debatable, it is the only updated research available. In the CFIB's survey, both Newfoundland and Prince Edward Island, two provinces with low levels of manufacturing and non-financial activity, have the lowest cost of regulation among Canadian provinces. The lower cost of regulation could be a reflection of the industry structure rather than public policy. It is relevant to point out that the cost of regulation is an area of economics that must be developed for further investigation.
- 43 There is a correlation of 0.86 between the Provincial Investment Climate Index and the Investment Manager Survey.
- 44 For further details, see Huberman, 2001.
- 45 This approach was only used for the measures considered in the Fiscal prudence component.
- 46 The categories and specific measures are delineated in table 6.
- 47 For the average deficit as a percentage of GDP subcomponent under the Fiscal prudence component, a province that registers an average surplus for the 2000–2004 period is automatically assigned a score of 10.
- 48 The rationale used to assign the scoring for the subcomponents was taken from Karabegović et al., 2004.
- 49 The same methodology has been used in other research studies like the Economic Freedom of the World (Gwartey et al., 2004) and the Economic Freedom of North America (Karabegović et al., 2005).
- 50 When there are several rates and thresholds that are between the maximum and minimum tax rate and thresholds, these are averaged.
- 51 Please see Clemens and Veldhuis, 2005 and Veldhuis and Clemens, 2006 for more thorough discussions of the academic research regarding the effects of taxation on firm and individual behaviour.
- 52 For further information, see Chen, 2000.
- 53 The three revisions are as follows: (1) the adoption of accelerated methods for computing depreciation for tax purposes in 1954; (2) the reduction of lifetimes used for calculating depreciation on equipment and machinery in 1962; (3) the investment tax credit for machinery and equipment of 1962.
- 54 For further details of unionization and productivity growth, see Becker and Olsen, 1996; Addison and Hirsch, 1989; and Hirsch and Schumacher, 2001.

References

- Addison, John, and Barry Hirsch (1989). "Union Effects on Productivity, Profits, and Growth: Has the Long Run Arrived?" *Journal of Labor Economics* 7 (January): 72–105.
- Aidt, Toke, and Zafiris Tzannatos (2002). *Unions and Collective Bargaining: Economic Effects in a Global Environment*. The World Bank.
- Alberta, Department of Finance (2005). *Budget 2005*. Government of Alberta.
- Alesina, Alberto, Silvia Ardagna, Giuseppe Nicoletti, Fabio Schiantarelli (2003). *Regulation and Investment*. NBER working paper 9560. National Bureau of Economic Research.
- Alonos, Alberto, Christina Exchevarria, and Kien Tran (2004). "Long-Run Economic Performance and the Labor Market." *Southern Economic Journal* 70, 4: 905–19.
- Aschauer, D.A. (1989). "Is Public Expenditure Productive?" *Journal of Monetary Economics* 23: 177–200.
- Ball, Lawrence, and Gregory Mankiw (1995). *What Do Budget Deficits Do?* NBER working paper 5263. National Bureau of Economic Research.
- Barro, Robert J. (1989). "The Ricardian Approach to Budget Deficits." *Journal of Political Economy* 3, 2 (Spring): 37–54.
- Becker, Brian, and Craig Olsen (1986). "Unionization and Shareholder Interest." *Industrial and Labor Review* 42: 246–61.
- Besley, Timothy, and Robin Burgess (2004). "Can Labor Regulation Hinder Economic Performance? Evidence from India." *Quarterly Journal of Economics* 119, 1 (February): 91–134.
- British Columbia, Department of Finance (2005a). *Budget and Fiscal Plan 2005/06*. Government of British Columbia.
- British Columbia, Department of Finance (2005b). *September Update: Budget and Fiscal Plan 2005/06*. Government of British Columbia.
- Canada, Department of Finance (2005). *Budget 2005*. Government of Canada.
- Carroll, Robert, Douglas Holtz-Eakin, Mark Rider, and Harvey Rosen (1998). *Entrepreneurs, Income Taxes, and Investment*. NBER working paper 6374. National Bureau of Economic Research.
- Cassou, Stephen, and Kevin Lansing (2004). "Growth Effects of Shifting from a Graduated-Rate Tax System to a Flat Tax." *Economic Inquiry* 42, 2 (April): 194–213.
- Cebula, J.R. (1988). "Federal Budget Deficit and Interest Rates: An Empirical Analysis for the United States." *Public Finance* 43, 3: 337–47.
- Chen, Duanjie (2000). *The Marginal Effective Tax Rate: The Only Rate That Matters in Capital Allocation*. C.D. Howe Institute.
- Clemens, Jason, Joel Emes, and Rodger Scott (2002). *Corporate Capital Tax: Canada's Most Damaging Tax*. The Fraser Institute.
- Clemens, Jason, and Niels Veldhuis (2005). *Growing Small Businesses in Canada: Removing the Tax Barrier*. Centre for Entrepreneurship and Markets, The Fraser Institute.
- Clemens, Jason, Amela Karabegović, and Niels Veldhuis (2005). *Explaining Canada's High Unionization Rates*. Fraser Alert, Labour Market Series (August). The Fraser Institute.
- Coval, Joshua, and Tobias Moskowitz (1999). "Home Bias at Home: Local Preference in Domestic Portfolios." *Journal of Finance* 54, 6: 2045–73.

- Cummins, Jason, Kevin Hassett, and Glenn Hubbard (1996). "Tax Reforms and Investment: A Cross-Country Comparison." *Journal of Public Economics* 62: 237–73.
- De Mooij, Ruud, and Sjef Ederveen (2003). "Taxation and Foreign Direct Investment: A Synthesis of Empirical Research." *International Tax and Public Finance* 10: 673–93.
- Douglass, Christopher, Michael Orlando, and Melinda Warren (1997). *Regulatory Changes and Trends: An Analysis of the 1998 Budget of the US Government*. Policy brief 182. Center for the Study of American Business.
- Engen, Eric, and Glenn Hubbard (2004). *Federal Government Debts and Interest Rates*. NBER working paper 10681. National Bureau of Economic Research.
- Evans, Paul (1987). "Interest Rates and Expected Future Deficits in the United States." *Journal of Political Economy* 95, 1: 34–58.
- Fallick, Bruce, and Kevin Hassett (1999). "Investment and Union Certification." *Journal of Labor Economics* 17, 3 (July): 570–82.
- Feldstein, Martin (1986). *Budget Deficits, Tax Rules, and Real Interest Rates*. NBER working paper 1970. National Bureau of Economic Research.
- Gwartney, James D., and Robert A. Lawson (2004). *Economic Freedom of the World: 2004 Annual Report*. The Fraser Institute.
- Hall, Robert, and Dale W. Jorgenson (1967). "Tax Policy and Investment Behavior." *American Economic Review* 57, 3: 391–414.
- Harchaoui, Tarek, and Faouzi Tarkhani (2003). *Public Capital and Its Contribution to the Productivity Performance of the Canadian Business Sector*. Economic analysis series 17. Statistics Canada.
- Hirsch, Barry T. (1997). *Unionization and Economic Performance: Evidence on Productivity, Profits, Investment, and Growth*. Public Policy Sources 3. The Fraser Institute.
- Hirsch, Barry T., and Edward J Schumacher (2001). "Private Sector Union Density and the Wage Premium: Past, Present, and Future." *Journal of Labor Research* 22, 3: 487–518.
- Hoelscher, Gregory (1983). "Federal Borrowing and Short-term Interest Rates." *Southern Economic Journal* 50, 2: 319–33.
- Hoelscher, Gregory (1986). "New Evidence on Deficits and Interest Rates." *Journal of Money, Credit and Banking* 18, 1: 1–17.
- Huberman, Gur (2001). "Familiarity Breeds Investment." *Review of Financial Studies* 14, 3: 659–80.
- Jiang, Bangqiao (2001). *A Review of Studies on the Relationship between Transport Infrastructure Investments and Economic Growth: Research Conducted for the Canada Transportation Act Review*. University of British Columbia.
- Jones, Laura, Tom Charette, Leanne Hachey, Shannon Martin, Pierre Emmanuel Paradis, and Robert Taylor (2005). *Rated "R": Prosperity Restricted by Red Tape*. Canadian Federation of Independent Business.
- Karabegović, Amela, Keith Godin, Jason Clemens, and Niels Veldhuis (2004). *Measuring the Flexibility of Labour Relations Laws in Canada and the United States*. Fraser Institute Digital Publication. <<http://www.fraserinstitute.ca/admin/books/files/MeasuringFlexLabRelLaw.pdf>>.
- Karabegović, Amela, and Fred McMahon (2005). *Economic Freedom of North America: 2005 Annual Report*. The Fraser Institute. <<http://www.fraserinstitute.ca/admin/books/files/EFNA2005.pdf>>.
- Manitoba, Department of Finance (2005). *Budget 2005*. Government of Manitoba.
- Meggison, William L., and Jeffrey M. Netter (2001). "From State to Market: A Survey of Empirical Studies on Privatization." *Journal of Economic Literature* 39: 321–89.

- McMillin, W.D. (1986). "Federal Deficits and Short-Term Interest Rates." *Journal of Macroeconomics* 8: 403–22.
- Metcalfe, David (2003). "Unions and Productivity, Financial Performance and Investment: International Evidence." In John Addison and Claus Schnabel, eds., *International Handbook of Trade Unions*.
- Mihlar, Fazil (1998). *The Cost of Regulation in Canada*. The Fraser Institute.
- Moore, Stephen (1995). *Government: America's #1 Growth Industry*. Institute for Policy Innovation.
- Munnell, Alicia H. (1990). "Why Has Productivity Growth Declined? Productivity and Public Investment." *New England Economic Review* (January/February): 3–22.
- Nadiri, M. Ishaq, and Theofanis Mamuneas (1994). "The Effect of Public Infrastructure and R&D Capital on the Cost Structure and Performance of U.S. Manufacturing Industries." *Review of Economics and Statistics* 76 1: 22–37.
- Nicoletti, Giuseppe, and Stefano Scarpetta (2003). "Regulation, Productivity, and Growth: OECD Evidence." *Economic Policy* (April): 9–72.
- Niskanen, William (2001). *Cato Handbook for Congress*. Cato Institute.
- Organisation for Economic Cooperation and Development (1994). *OECD Jobs Study: Part 1*. OECD.
- Pricewaterhouse Coopers (2005). *Tax Facts and Figures for Individuals and Corporations: Canada 2005*.
- Prince Edward Island, Department of Finance (2005). *Budget 2005*. Government of Prince Edward Island.
- Regulatory Affairs Directorate (1996). *Comparison of Federal Regulatory Spending and the Cost of Regulation: The USA Evidence*. Treasury Board Secretariat.
- Statistics Canada (2003). *Air Carrier Traffic at Canadian Airports 2002*. Catalogue No. 51-203-XIB.
- Statistics Canada (2004a). *Air Carrier Traffic at Canadian Airports 2003*. Catalogue No. 51-203-XIB.
- Statistics Canada (2004b). *Financial Management System (FMS) 2004*. Catalogue No. 68F0023XIB.
- Statistics Canada (2005a). *Air Carrier Traffic at Canadian Airports 2004*. Catalogue No. 51-203-XIB.
- Statistics Canada (2005b). *Provincial Economic Accounts*.
- Statistics Canada (2005c). Public Institutions Division, Financial Management System.
- Statistics Canada (2005d). *Rail in Canada—2003*. Catalogue No. 52-216-XIE.
- Statistics Canada (2005e). *Shipping in Canada—2003*. Catalogue No. 54-205-XIE.
- Transport Canada (2003). *Transportation in Canada 2003, Annual Report*.
- Treff, Karin, and David B. Perry (2005). *Finances of the Nation 2004*. Canadian Tax Foundation.
- Veldhuis, Niels, and Jason Clemens (2006). *Productivity, Prosperity, and Business Taxes*. Studies in Economic Prosperity 3 (January). The Fraser Institute.
- Weidenbaum, Murray, and Robert DeFina (1976). *The Cost of Federal Regulation of Economic Activity*. Competitive Enterprise Institute.

The Fraser Institute's Investment Manager Surveys

- Dixon, Ted, Fazil Mihlar, and Jason Clemens (1998). *Survey of Senior Investment Managers in Canada: Results for Spring 1998*.
- Clemens, Jason, and Ted Dixon (1999). *Survey of Senior Investment Managers in Canada: Results for Summer 1999*.
- The Fraser Institute (2000). *Senior Investment Managers in Canada: Results for Summer 2000*.
- The Fraser Institute (2001). *Senior Investment Managers in Canada: Results for Spring 2001*.
- Clemens, Jason (2002). "Investment Managers Survey: Provincial Investment Climates." *Fraser Forum* (May): 29–31.
- Karabegovic, Amela, Jason Clemens, and Keith Godin (2004). "Investment Managers Survey: Provincial Investment Climates." *Fraser Forum* (November): 16–18.

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