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with Deborah Martinez

# Economic Freedom of North America 2012

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with Deborah Martinez

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# Contents



# **Executive Summary**

This is the eighth edition of the annual report, *Economic Freedom of North America*. The statistical results of this year's study persuasively confirm those published in the previous seven editions: economic freedom is a powerful driver of growth and prosperity. Those provinces and states that have low levels of economic freedom continue to leave their citizens poorer than they need or should be.

#### Background

The index published in *Economic Freedom of North America* rates economic freedom on a 10-point scale at two levels, the subnational and the all-government. At the allgovernment level, the index captures the impact of restrictions on economic freedom by all levels of government (federal, state/provincial, and municipal/local). At the subnational level, it captures the impact of restrictions by state or provincial and local governments. *Economic Freedom of North America* employs 10 components for the United States and Canada in three areas: 1. Size of Government; 2. Takings and Discriminatory Taxation; and 3. Labor Market Freedom.

Not only is economic freedom important for the level of prosperity; growth in economic freedom spurs economic growth. As expected, the impact of economic freedom at the all-government level is typically greater than the impact at the subnational level since the first index captures a broader range of limitations on economic freedom than the second.

#### **Economic Freedom and Prosperity**

The econometric testing shows that a one-point improvement in economic freedom at the all-government level increases per-capita GDP by US\$13,276 for US states and by US\$7,584 (CA\$7,963 using a conversion rate of 1.05) for Canadian provinces. At the subnational level, a one-point improvement in economic freedom increases per-capita GDP by US\$7,641 for US states and by US\$7,679 (CA\$8,063) for Canadian provinces.

A 1.00% increase in the growth rate of economic freedom at the all-government level (e.g., from 4.00% per year to 4.04% per year) will induce an increase of 0.97% in the growth rate of per-capita GDP for US states and an increase of 0.65% in the growth rate of per-capita GDP for Canadian provinces. A 1.00% increase in the growth rate of economic freedom at the subnational level will induce an increase of 0.74% in the growth rate of per-capita GDP for US states and 0.64% increase in the growth rate for Canadian provinces. The econometric results are stable and consistent through a number of sensitivity tests. The importance of these results is reinforced by their consistency with those in previous reports. The similarity of results regardless of the structure of the index or year of the tests is quite remarkable.

#### **Results for Canada and the United States**

This year we have introduced a "world-adjusted" index for Canada and the United States at the all-government level. This allows us to take into account the growing gap between Canada and the United States in the index published in *Economic Freedom of the World* (Gwartney, Lawson, and Hall, 2012), where Canada is now well ahead of the United States.

In past years, we have not included in the index data from several areas used in the world index—in particular, data for openness to trade, for the legal system and property rights, and for regulation on credit and business. There were two reasons for this. Firstly, data in these areas were typically not available at the state/ provincial level. Secondly, these are primarily areas of national policy and would vary little from province to province or state to state. Since Canada and the United States had similar scores in these areas in the Economic Freedom of the World Index that also meant that these factors varied little from province to state and thus it was not essential to include these data in the North American index.

However, scores in these areas in the world index have widened between Canada and the United States with the exception of openness to trade, which gains an almost identical score in the world index for both nations. Thus, at the all-government level we have created a "world-adjusted" index that has each province's and state's score adjusted by world index data for the legal system and property rights and for regulation on credit and business.

The gap which has grown between Canada and the United States in these areas much favors Canada and thus the scores of the provinces significantly increase when these data are included—something that would not have occurred in earlier years when the scores in these areas were closer. Canadian provinces now lead US states in average economic freedom, with the provincial average at 6.8 compared to 6.7 out of 10 for US states.

Thus in the world-adjusted index two of the top three jurisdictions are Canadian, with Alberta in first place and Saskatchewan in third. Delaware in second spot is the highest ranked US state. In fact, four of the top 10 jurisdictions are Canadian, with Newfoundland & Labrador in 9<sup>th</sup> and British Columbia in 10<sup>th</sup>. Nonetheless, a Canadian jurisdiction, Prince Edward Island, still lands in last spot, with New Mexico coming in at 59<sup>th</sup> and West Virginia at 58<sup>th</sup>. Interestingly, this means that Canadian provinces hold both the top and bottom spots on the adjusted index.

#### Chapter 3: Economic Freedom of the Mexican States in 2010

Nathan Ashby in the 2008 edition of this report published a preliminary measure of economic freedom for Mexican states. This work has been rife with challenges, some of which have been resolved, while others continue to be worked out.

Many of these challenges were overcome by Nathan J. Ashby, Deborah Martinez, and Avilia Bueno, who updated this chapter in 2011. This year, the index was updated again. The authors have been able to find data for nine of the ten measures currently included in the index of economic freedom in Canada and the United States and the calculations of many of the components that were included in the 2008 index have been improved using more complete data. The index is now available for multiple years and can be used for analyzing the Mexican economy through time.

The index of economic freedom in Mexico from its start has included variables for the rule of law and property rights as they vary across the Mexican states. The measures are:

#### Area 4: Legal System and Property Rights

4A: Impartiality of Judges
4B: Institutional Quality of Judicial System
4C: Trustworthiness and Agility of Public Property Registry
4D: Corruption

#### **Results for Mexico**

Despite the challenges in constructing this index, the same patterns are seen in Mexico as in the United States and Canada. Higher levels of economic freedom result in increased prosperity. For example, the average daily wage (2010 pesos) is MX\$198 in the Mexican states in the top quintile, compared MX\$168 in the bottom quintile.

# Chapter 1 Economic Freedom of Canada and the United States in 2010

# **Economic Freedom and the Index**

*Economic Freedom of North America* is an attempt to gauge the extent of the restrictions on economic freedom imposed by governments in North America. The index published here measures economic freedom at two levels, the subnational and the all-government. At the subnational level, it measures the impact on economic freedom of provincial and municipal governments in Canada and of state and local governments in the United States. At the all-government level, it measures the impact of all levels of government—federal, provincial/state, and municipal/local in Canada and the United States. All 10 provinces and 50 states are included.<sup>1</sup> (See figures 1 and 2.)

The study examines the impact of economic freedom on both the level of economic activity and the growth of economic activity. The econometric testing presented in this publication shows that in Canada and the United States economic freedom fosters prosperity and growth. Economic freedom increases the affluence of individuals. This finding is consistent with other studies of economic freedom.<sup>2</sup> The results are highly significant and remarkably stable through a number of different sensitivity tests.

#### What Is Economic Freedom and how is it measured in this index?

Writing in *Economic Freedom of the World*, 1975–1995, James Gwartney and his co-authors defined economic freedom in the following way.

- [1] *Economic Freedom of North America* examines only US states and Canadian provinces because of the limitations of the data available for the Mexican states. Chapter 3: Economic Freedom of the Mexican States in 2010 provides a report on the Mexican states, although the results remain preliminary and subject to revision. Dr. Ashby published an earlier Mexican index in the 2008 edition of this report.
- [2] See Easton and Walker, 1997; De Haan and Sturm, 2000; and related papers at <<u>http://www.freetheworld.com/papers.html</u>>. For the latest summary of literature on economic freedom at an international level, see Doucouliagos and Ulubasoglu, 2006.

#### Score Rank Alberta 8.1 1 Delaware 7.5 2 Saskatchewan 7.4 3 7.3 4 Texas Nevada 7.3 5 Wyoming 7.2 6 Colorado 7.1 7 South Dakota 7.1 8 Newfoundland & Labrador 7.1 9 **British Columbia** 7.1 10 Illinois 7.1 11 7.0 12 Georgia Nebraska 7.0 13 Utah 7.0 14 Alaska 7.0 15 New Hampshire 7.0 16 North Carolina 7.0 17 7.0 18 lowa Louisiana 7.0 19 Connecticut 6.9 20 Ontario 6.9 21 Indiana 6.9 22 Minnesota 6.9 23 Kansas 6.8 24 Oklahoma 6.8 25 Virginia 6.8 26 Oregon 6.8 27 Tennessee 6.8 28 Massachusetts 6.8 29 California 6.8 30 Washington 6.7 31 Manitoba 6.7 32 North Dakota 6.7 33 New York 6.7 34 35 Arizona 6.7 Idaho 6.7 36 New Jersey 6.6 37 Missouri 6.6 38 Florida 39 6.6 Wisconsin 6.6 40 Pennsylvania 6.5 41 Maryland 6.5 42 Ohio 6.5 43 Michigan 6.5 44 New Brunswick 6.5 45 Alabama 6.4 46 South Carolina 6.4 47 Hawaii 6.3 48 Rhode Island 6.3 49 Quebec 6.3 50 Arkansas 6.3 51 6.2 Montana 52 6.2 Maine 53 Kentucky 6.2 54 Vermont 6.1 55 Nova Scotia 6.1 56 57 Mississippi 6.1 West Virginia 6.0 58 New Mexico 6.0 59 Prince Edward Island 5.9 60 2 4 6 8 0 10 Least Economic Freedom -Greatest Economic Freedom

#### Figure 1.1: Summary of 2010 Ratings at the World-adjusted All-Government Level

Note: For simplicity, we report scores rounded to one decimal while the rankings are based on our unrounded scores. Provinces and states with the same rounded scores will therefore have different rankings. This difference does not imply that higher-ranked states have greatly higher economic freedom.

Tennessee		•			7.7	1
South Dakota		1			77	2
Delaware		1	I		77	3
Alberta					7.6	4
Texas		1			7.5	5
Virginia		1	I		7.4	6
Louisiana		1			7.2	7
Georgia		1			7.1	8
New Hampshire		1			7.1	9
Alabama		1			7.0	10
Colorado		1			7.0	11
Nebraska		1			7.0	12
Wyoming					7.0	13
North Dakota		 			6.9	14
Utah		1			6.9	15
North Carolina					6.9	16
Indiana		1			6.8	17
Maryland		1			6.8	18
Oklahoma					6.8	19
Missouri		1			6.7	20
Arizona		1			6.7	21
Nevada					6.7	22
Connecticut		T T			6.6	23
lowa		I	- 		6.6	24
Kansas					6.6	25
Florida		1			6.5	26
Massachusetts		· 			6.5	27
Alaska					6.5	28
South Carolina		T			6.5	29
Illinois		1	I		6.4	30
Mississippi					6.4	31
Minnesota		1	I		6.3	32
Arkansas		1	I		6.2	33
Oregon		:			6.2	34
Idano Washington		1	l		0.2	35
Vashington		1	1		0.1	30
Saskatshowan		1			6.1	27 20
Saskalchewan British Columbia		1			6.1	20
Kontucky		1			6.1	40
Montana		1			6.0	40
Hawaii		1	1		5.0	42
Wisconsin		i -		I I	5.9	43
Newfoundland & Labrador		1		I I I I	5.7	44
New Mexico		1			5.7	45
New Jersev		;		I I	5.7	46
Ontario		Ĩ		I I	5.7	47
Maine		1			5.7	48
West Virginia		-			5.7	49
California		1		I I	5.7	50
Michigan		1			5.6	51
Ohio					5.5	52
Manitoba		1			5.5	53
New Brunswick		1			5.5	54
Rhode Island		· •			5.5	55
New York		1			5.5	56
Vermont		1			5.3	57
Prince Edward Island					5.2	58
Nova Scotia		1 •			5.1	59
Quebec		- 			4.4	60
	0	2 4	н <u>б</u>	6 8		10
	Least Economic Fre	edom		Greatest Eco	onomic Fre	edom

### Figure 1.2: Summary of 2010 Ratings at the Subnational Level

Note: For simplicity, we report scores rounded to one decimal while the rankings are based on our unrounded scores. Provinces and states with the same rounded scores will therefore have different rankings. This difference does not imply that higher-ranked states have greatly higher economic freedom.

Individuals have economic freedom when (a) property they acquire without the use of force, fraud, or theft is protected from physical invasions by others and (b) they are free to use, exchange, or give their property as long as their actions do not violate the identical rights of others. Thus, an index of economic freedom should measure the extent to which rightly acquired property is protected and individuals are engaged in voluntary transactions. (Gwartney, Lawson, and Block, 1996: 12)

The freest economies operate with minimal government interference, relying upon personal choice and markets to answer basic economic questions such as what is to be produced, how it is to be produced, how much is produced, and for whom production is intended. As government imposes restrictions on these choices, there is less economic freedom.

The research flowing from the data generated by the annually published report, *Economic Freedom of the World*,<sup>3</sup> a project the Fraser Institute initiated over a quarter century ago, shows that economic freedom is important to the wellbeing of a nation's citizens. This research has found that economic freedom is positively correlated with per-capita income, economic growth, greater life expectancy, lower child mortality, the development of democratic institutions, civil and political freedoms, and other desirable social and economic outcomes. Just as *Economic Freedom of the World* seeks to measure economic freedom on an international basis, *Economic Freedom of North America* has the goal of measuring differences in economic freedom among the Canadian provinces and US states.

In 1999, the Fraser Institute published *Provincial Economic Freedom in Canada: 1981–1998* (Arman, Samida, and Walker, 1999), a measure of economic freedom in 10 Canadian provinces. *Economic Freedom of North America* updates and, by including the 50 US states, expands this initial endeavor. It looks at the 10 Canadian provinces (Northwest Territories, Nunavut, and Yukon are not included) and the 50 US states from 1981 to 2010. Each province and state is ranked on economic freedom at both the subnational and the all-government levels. This helps isolate the impact of different levels of government on economic freedom in Canada and the United States. We examine state- and province-level data in three areas of economic freedom: size of government; takings and discriminatory taxation; and labor-market freedom. This year we also introduce a "world-adjusted" index that includes additional variables found in *Economic Freedom of the World* (see discussion below).

Limited or missing data create difficulties in testing relationships between economic freedom and key economic components. For example, we are able to construct only a partial model of growth as data on investment for individual states, an important part of any growth model, are not available. Fortunately, as discussed later, the effect of omitting an investment component on the estimated economic-freedom coefficient is likely to be of little quantitative significance. High-school graduation rates are

<sup>[3]</sup> A list of many of these articles and additional information can be found at <http://www.freetheworld. com/papers.html>.

used as a proxy for human capital but in our testing this indicator often does not have the expected sign and is seldom significant in the regressions in which it is included.

Because of data limitations and revisions, some time periods are either not directly comparable or are not available. When necessary, we have used the data closest to the missing time period as an estimate for the missing data. If there have been changes in this component during this period, this procedure would introduce some degree of error in the estimate of economic freedom for the particular data point. However, omitting the component in the cases when it is missing and basing the index score on the remaining components may create more bias in the estimate of overall economic freedom. We also use federal tax revenue estimates based on total tax revenue collections in the United States to impute the tax burden as the state level beginning in 2006 since the Tax Foundation, the source of the tax burden measures, only constructs these measures up to the year 2005.

We have made one important addition to the index this year. In past years, we have not included in the North American index data from several areas used in the index published in *Economic Freedom of the World* (EFW)—in particular, data for openness to trade, for the legal system and property rights, and for regulation on credit and business. There were two reasons for this. Firstly, data in these areas are typically not available at the state/provincial level. Secondly, these are primarily areas of national policy and would vary little from province to province or state to state. Since Canada and the United States had similar scores for these areas in the index of nations and territories covered by the broader world report, that also meant that these factors varied little from province to state and thus it was not essential to include these data in the index of economic freedom in North America.

However, in the most recent index published in *Economic Freedom of the World* gaps have widened between the scores of Canada and the United States in these areas, with the exception of openness to trade, for which each nation has an almost identical score. Thus, in this year's edition of *Economic Freedom of North America* at the all-government level we have created a "world-adjusted" index that has each province's and state's score adjusted by data from the world index for the legal system and property rights and for regulation of credit and business.

The gap that has grown between Canada and the United States in these areas much favors Canada and thus the scores of the provinces significantly increase when these data are included—something that would not have occurred in earlier years when the scores from the world index in these areas were closer. Thus, in the world-adjusted index two of the top three jurisdictions are Canadian, with Alberta in first place and Saskatchewan in third. Delaware, in second spot, is the highest ranked US state. In fact, four of the top 10 jurisdictions are Canadian, with Newfoundland & Labrador in 9<sup>th</sup> and British Columbia in 10<sup>th</sup>.<sup>4</sup> Nonetheless, a Canadian jurisdiction, Prince Edward Island, still lands in last spot, with New Mexico coming in at 59<sup>th</sup> and

 <sup>[4]</sup> In the tables, Newfoundland & Labrador, British Columbia, and Illinois have a rounded score of 7.1 but, with unrounded scores, Newfoundland & Labrador edges out British Columbia which, in turn, edges out Illinois.

West Virginia at 58<sup>th</sup>. In fact, Canadian provinces have a higher level of economic freedom, 6.8 out of 10, on average, than US states with an average score of 6.7.

Table 2.1B (p. 27) shows the scores for these additional areas: for regulation of credit (component 5A in the world index from EFW), the United States in the world index received a score of 6.9 while Canada's was 9.3; for regulation of business (component 5C in the world index), the United States had 7.3 and Canada, 8.0; and for legal system and property rights (Area 2 in the world report), the United States had 7.1 and Canada, 8.2. The calculations for the adjusted index and the data sources for the world scores are found in appendixes A and B. All these scores are taken from Gwartney, Lawson, and Hall, 2012.<sup>5</sup> We are including the adjusted index only for the data-year 2010, though future editions may include adjusted data for previous years. Since these data are at the national level, they do not affect calculations of the sub-national indexes. Nor are they used in econometric results presented later: these regressions are done solely on a national basis and are calculated separately for Canada and the United States. Thus, the adjusted areas where all provinces receive the same national score and all states receive the same national score are not relevant for these regressions.

The theory of economic freedom<sup>6</sup> is no different at the subnational and allgovernment level than it is at the global level, although different proxies consistent with the theory of economic freedom must be found that suit subnational and allgovernment measures. The 10 components of the non-adjusted indexes fall into three areas: Size of Government, Takings and Discriminatory Taxation, and Labor Market Freedom. Most of the components we use are calculated as a ratio of gross domestic product (GDP) in each jurisdiction and thus do not require the use of exchange rates or purchasing power parities (PPP). The exception is component 2B, Top Marginal Income Tax Rate and the Income Threshold at Which It Applies, where purchasing power parity is used to calculate equivalent top thresholds in Canada in US dollars.

# **Description of Components**

Using a simple mathematical formula to reduce subjective judgments, a scale from zero to 10 was constructed to represent the underlying distribution of the 10 components in the index. The highest possible score is 10, which indicates a high degree of economic freedom.<sup>7</sup> Thus, this index is a relative ranking. The rating formula is consistent across time to allow an examination of the evolution of economic freedom. To construct the overall index without imposing subjective judgments about the relative importance of the components, each area was equally weighted and each component within each area was equally weighted (see Appendix A: Methodology, p. 51, for more details).

- [6] See Gwartney and Lawson, 2007. The website, <<u>http://www.freetheworld.com</u>>, has references to a number of important papers and books that explore the theory of economic freedom.
- [7] Due to the way scores for economic freedom are calculated, a minimum-maximum procedure discussed in Appendix A: Methodology (p. 51), a score of 10 is not indicative of perfect economic freedom.

<sup>[5]</sup> Data, adjusted as of October 23, 2012, available at <www.freetheworld.com/2012/EFWdatabase2012.xls>.

The index of economic freedom for Canada and the United States assigns a higher score when component 1A, General Consumption Expenditures by Government as a Percentage of GDP, is smaller in one state or province relative to another. This would seem to contradict the theory of economic freedom, which does not predict that a government size of zero maximizes freedom. Indeed, important government functions, such as the enforcement of the rule of law, are necessary for economic freedom and freedom more broadly. However, all that the theory of economic freedom requires is that governments be large enough to undertake an adequate but minimal level of the "protective" and "productive" functions of government, discussed in the next section. It is unlikely that any government considered in this sample is too small to perform these functions at the minimal required level.

# Area 1 Size of Government

1A General Consumption Expenditures by Government as a Percentage of GDP As the size of government expands, less room is available for private choice. While government can fulfill useful roles in society, there is a tendency for government to undertake superfluous activities as it expands: "there are two broad functions of government that are consistent with economic freedom: (1) protection of individuals against invasions by intruders, both domestic and foreign, and (2) provision of a few selected goods—what economists call public goods" (Gwartney et al., 1996: 22). These two broad functions of government are often called the "protective" and "productive" functions of government. Once government moves beyond these two functions into the provision of private goods, goods that can be produced by private firms and individuals, it restricts consumer choice and, thus, economic freedom (Gwartney et al., 1996). In other words, government spending, independent of taxation, by itself reduces economic freedom once this spending exceeds what is necessary to provide a minimal level of protective and productive functions. Thus, as the size of government consumption grows, a jurisdiction receives a lower score in this component.

#### 1B Transfers and Subsidies as a Percentage of GDP

When the government taxes one person in order to give money to another, it separates individuals from the full benefits of their labor and reduces the real returns of such activity (Gwartney et al., 1996). These transfers represent the removal of property without providing a compensating benefit and are, thus, an infringement on economic freedom. Put another way, when governments take from one group in order to give to another, they are violating the same property rights they are supposed to protect. The greater the level of transfers and subsidies, the lower the score a jurisdiction receives.

#### 1C Social Security Payments as a Percentage of GDP

When private, voluntary arrangements for retirement, disability insurance, and so on are replaced by mandatory government programs, economic freedom is diminished.

# Area 2 Takings and Discriminatory Taxation

- 2A Total Tax Revenue as a Percentage of GDP
- 2B Top Marginal Income Tax Rate<sup>®</sup> and the Income Threshold at Which It Applies
- 2C Indirect Tax Revenue as a Percentage of GDP

#### 2D Sales Taxes Collected as a Percentage of GDP

Some form of government funding is necessary to support the functions of government but, as the tax burden grows, the restrictions on private choice increase and thus economic freedom declines. Taxes that have a discriminatory impact and bear little reference to services received infringe on economic freedom even more: "High marginal tax rates discriminate against productive citizens and deny them the fruits of their labor" (Gwartney et al., 1996: 30). In each of components except 2B, a higher ratio lowers a jurisdiction's score in this component. Top personal incometax rates are rated by the income thresholds at which they apply. Higher thresholds result in a better score.

Examining the separate sources of government revenue gives the reader more information than just examining a single tax source or overall taxes. Nonetheless, total tax revenue is included to pick up the impact of taxes, particularly various corporate and capital taxes, not included in the other three components.

In examining the two areas above, it may seem that Areas 1 and 2 create a double counting, in that they capture the two sides of the government ledger sheet, revenues and expenditures, which presumably should balance over time. However, in examining subnational jurisdictions, this situation does not hold. In the United States, and even more so in Canada, a number of intergovernmental transfers break the link between taxation and spending at the subnational level.<sup>9</sup> The break between revenues and spending is even more pronounced at the all-government level, which includes the federal government. Obviously, what the federal government spends in a state or a province does not necessarily bear a strong relationship to the amount of money it raises in that jurisdiction. Thus, to take examples from both Canada and the United States, the respective federal governments spend more in the province of Newfoundland & Labrador and the state of West Virginia than they raise through taxation in these jurisdictions while the opposite pattern holds for Alberta and Connecticut. As discussed above, both taxation and spending

<sup>[8]</sup> See Appendix A: Methodology (p. 51) for further discussion of how the rating for the top marginal tax rate and its threshold was derived.

<sup>[9]</sup> Most governments have revenue sources other than taxation and national governments also have international financial obligations so that the relation between taxation and spending will not be exactly one to one, even at the national level. Nevertheless, over time, the relationship will be close for most national governments, except those receiving large amounts of foreign aid.

can suppress economic freedom. Since the link between the two is broken when examining subnational jurisdictions, it is necessary to examine both sides of the government's balance sheet.

# Area 3 Regulation

### 3A Labor Market Freedom

3Ai Minimum Wage Legislation

High minimum wages restrict the ability of employees and employers to negotiate contracts to their liking. In particular, minimum wage legislation restricts the ability of low-skilled workers and new entrants to the workforce to negotiate for employment they might otherwise accept and, thus, restricts the economic freedom of these workers and the employers who might have hired them.

This component measures the annual income earned by someone working at the minimum wage as a ratio of per-capita GDP. Since per-capita GDP is a proxy for the average productivity in a jurisdiction, this ratio takes into account differences in the ability to pay wages across jurisdictions. As the minimum wage grows relative to productivity, thus narrowing the range of employment contracts that can be freely negotiated, there are further reductions in economic freedom, resulting in a lower score for the jurisdiction. For example, minimum wage legislation set at 0.1% of average productivity is likely to have little impact on economic freedom; set at 50% of average productivity, the legislation would limit the freedom of workers and firms to negotiate employment to a much greater extent. For instance, a minimum wage requirement of \$2 an hour for New York will have little impact but, for a developing nation, it might remove most potential workers from the effective workforce. The same idea holds, though in a narrower range, for jurisdictions within Canada and the United States.

#### 3Aii Government Employment as a Percentage of Total State/Provincial Employment

Economic freedom decreases for several reasons as government employment increases beyond what is necessary for government's productive and protective functions. Government, in effect, is using expropriated money to take an amount of labor out of the labor market. This restricts the ability of individuals and organizations to contract freely for labor services since employers looking to hire have to bid against their own tax dollars to obtain labor. High levels of government employment may also indicate that government is attempting to supply goods and services that individuals contracting freely with each other could provide on their own; that the government is attempting to provide goods and services that individuals would not care to obtain if able to contract freely; or that government is engaging in regulatory and other activities that restrict the freedom of citizens. Finally, high levels of government employment suggest government is directly undertaking work that could be contracted privately. When government, instead of funding private providers, decides to provide a good or service directly, it reduces economic freedom by limiting choice and by typically creating a governmental quasi-monopoly in provision of services. For instance, the creation of school vouchers may not decrease government expenditures but it will reduce government employment, eroding government's monopoly on the provision of publicly funded education services while creating more choice for parents and students and, thus, enhancing economic freedom.

#### 3Aiii Union Density

Workers should have the right to form and join unions, or not to do so, as they choose. However, laws and regulations governing the labor market often force workers to join unions when they would rather not, permit unionization drives where coercion can be employed (particularly when there are undemocratic provisions such as union certification without a vote by secret ballot), and may make decertification difficult even when a majority of workers would favor it. On the other hand, with rare exceptions, a majority of workers can always unionize a workplace and workers are free to join an existing or newly formed union.

To this point in time, there is no reliable compilation of historical data about labor-market laws and regulations that would permit comparisons across jurisdictions for both the United States and Canada. In this report, therefore, we attempt to provide a proxy for this component. We begin with union density, that is, the percentage of unionized workers in a state or province. However, a number of factors affect union density: laws and regulations, the level of government employment, and manufacturing density. In measuring economic freedom, our goal is to capture the impact of policy factors, laws and regulations, and so on, not other factors. We also wish to exclude government employment—although it is a policy factor that is highly correlated with levels of unionization—since government employment is captured in component 3B above.

Thus, we ran statistical tests to determine how significant an effect government employment had on unionization—a highly significant effect—and held this factor constant in calculating the component. We also ran tests to determine if the size of the manufacturing sector was significant. It was not and, therefore, we did not correct for this factor in calculating the component. It may also be that the size of the rural population has an impact on unionization. Unfortunately, consistent data from Canada and the United States are not available. Despite this limitation, the authors believe this proxy component is the best available at the moment. Its results are consistent with the published information that is available (see, for example, Godin et al., 2006).<sup>10</sup>

<sup>[10]</sup> The National Right to Work Legal Defense Foundation (2011) provides a reasonable measure of right-to-work laws and when they were established for US states (see <<u>http://www.nrtw.org/b/rtw\_faq.htm</u>>. We considered using this as to replace or complement the measure of unionization rates that has been used in the past. We discovered, however, that these laws seem to drive differences in unionization rates among states more strongly than we had originally expected. The benefit of using a measure of unionization rates is that it picks up some of the differences in

Most of the components above exist for both the subnational and the allgovernment levels. Total revenue from own sources, for example, is calculated first for local/municipal and provincial/state governments, and then again counting all levels of government that capture revenue from individuals living in a given province or state.

# Components added for the world-adjusted index

Since, as discussed above, Canada and the United States have been diverging on scores for business and credit regulation, the world-adjusted index expands the regulatory area to include data on these areas. Labour regulation becomes one of three components of Area 3: Regulation, which comprises 3A: Labour market regulation; 3B: Regulation of credit markets; and 3C: Business regulations. (See Appendix A for how Area 3 is now calculated.)

Why the regulation of credit and business affects economic freedom is easily understood. When government limits who can lend to and borrow from whom and puts other restrictions on credit markets, economic freedom is reduced; when government limits business people's ability to make their own decisions; freedom is reduced. The variables from the world index published in *Economic Freedom of the World* are:

#### 3B Regulation of credit markets

- 3Bi Ownership of banks
- 3Bii Private sector credit
- 3Biii Interest rate controls/negative real interest rates

#### **3C** Business regulations

- 3Ci Administrative requirements
- 3Cii Bureaucracy costs
- 3Ciii Starting a business
- 3Civ Extra payments/bribes/favoritism
- 3Cv Licensing restrictions
- 3Cvi Cost of tax compliance

enforcement and informal freedoms not picked up by the legislation. For instance, some states may have right-to-work laws with weak enforcement while other states that do not have such laws may actually protect labor freedom more in practice. Although we decided not to include a measure for right-to-work legislation, the analysis was fruitful in that it strongly validates the proxy as a suitable, if not superior, measure of workers' freedom.

#### Area 4 Legal system and property rights

Protection of property rights and a sound legal system are vital for economic freedom, otherwise the government and other powerful economic actors for their own benefit can limit the economic freedom of the less powerful. The variables for Legal System and Property Rights from the world index are:

- 4A Judicial independence
- 4B Impartial courts
- 4C Protection of property rights
- 4D Military interference in rule of law and politics
- 4E Integrity of the legal system
- 4F Legal enforcement of contracts
- 4G Regulatory restrictions on the sale of real property
- 4H Reliability of police
- 41 Business costs of crime

More information on the variables and the calculations can be found in Appendixes A and B. The inclusion of these data from the world index raise the scores for both the Canadian provinces and US states since both Canada and the United States do well in these areas when compared to other nations, as is done in the world index.

# **Overview of the Results**

Following are some graphs that demonstrate dramatically the important links between prosperity and economic freedom, links that are more fully explored in the section on econometric testing, Economic Freedom and Economic Well-Being (p. 16). Figure 1.3 breaks economic freedom into quintiles at the world-adjusted all-government level. For example, the category on the far left of the chart, "Least Free," represents the jurisdictions that score in the lowest fifth of the economic freedom ratings, the 12 lowest of the 60 Canadian and American jurisdictions. The jurisdictions in this least free quintile have an average per-capita GDP of just US\$37,218 (CA\$39,079).<sup>11</sup> This compares to an average per-capita GDP of US\$53,085 (CA\$55,739) for the 12 top-ranked jurisdictions. Figure 1.4 is the same type of chart as figure 1.3 but shows economic freedom at the subnational level. Here, the least free quintile has an average per-capita GDP of US\$41,2244 (CA\$43,285) compared to the most free quintile, which has an average per-capita GDP of US\$49,628 (CA\$52,109).

Finally, in this illustrative section, we look at the relationship between the growth of economic freedom and the growth of a jurisdiction's economy, another topic more fully explored in the section on econometric testing. In figure 1.5 and figure 1.6,

<sup>[11]</sup> The most recent data available are from 2010 and are converted into 2010 US constant dollars. Note that an exchange rate of \$1.05 was used throughout the study (Heston, Summers, and Aten, 2011).



Figure 1.3: Economic Freedom at the World-adjusted All-Government Level and GDP per Capita, 2010

# Figure 1.4: Economic Freedom at the Subnational Level and GDP per Capita, 2010



**Economic Freedom Quintiles** 

www.freetheworld.com / www.fraserinstitute.org / Fraser Institute





Figure 1.6: Average Growth in GDP per Capita and Average Growth in Economic Freedom at the Subnational Level, 1982–2010



(Deviations from National Mean)

growth in economic freedom is plotted along the horizontal axis while growth in GDP per capita is plotted along the vertical axis. Again, the expected relationships are found, with economic growth strongly linked to growth in economic freedom. For consistency of comparison over time, we use the unadjusted numbers for the all-government comparison.

#### Comparing the All-Government Level and the Subnational Level

Subnational responsibilities in Canada and the United States differ. Thus, government spending and taxation patterns cannot be directly compared. Instead, we use an "adjustment factor" (see Appendix A: Methodology, p. 51). We should also note that the Canadian provinces do much better in the all-government world-adjusted index since the data that are most favorable to Canada are found at the national level.

#### **Overview of the Results for the United States**

The 10 states at the bottom of the all-government index were West Virginia, New Mexico, Mississippi, Vermont, Montana, Hawaii, Maine, Kentucky, Arkansas, and Alabama. Their average per-capita GDP in 2010 was \$38,017 (in constant 2010 dollars) compared to an average of \$48,319 for the other 40 states. The top 10 states were Delaware, Texas, Nevada, Wyoming, Colorado, South Dakota, Georgia, Nebraska, Illinois, and North Carolina. Their average per-capita GDP in 2010 was \$51,737 compared to \$44,889 for the lowest 40 states.

It should be emphasized that this index measures economic freedom, not growth factors. The examples discussed here are for illustrative purposes, providing only a snapshot in time. The econometric testing is far more reliable and, as discussed in this report, shows a powerful, consistent, and robust relationship between economic freedom and growth.

#### **Overview of the Results for Canada**

The average per-capita GDP in 2010 of the top three provinces on the all-government index, Alberta, Saskatchewan, and Newfoundland & Labrador, is \$57,298 (CA\$60,163) compared to \$34,901 (CA\$36,646) for the three lowest provinces, Prince Edward Island, Nova Scotia, and Quebec, with the Canadian average at \$43,688 (CA\$45,872) (Statistics Canada, 2011).

There is an interesting contrast between Ontario and British Columbia. From 1993 and 2000, economic freedom in British Columbia was growing at a slower pace than that in Ontario at both the all-government and subnational levels. During this period, British Columbia's per capita economic growth was just 7.5%, compared to Ontario's 26.5%. British Columbia suffered from relatively weak economic freedom growth while Ontario benefited from relatively strong growth. From 2000 to 2010, economic freedom in British Columbia increased from 5.3 to 6.0 while Ontario's fell from 6.0 to 5.7. (Since these are comparisons within Canada, the world-adjusted index is not used.) While both economies were adversely affected by the global economic crisis and slowdown in the latter part of the decade; British Columbia grew by 12.4% while Ontario grew just 2.4%.

# **Economic Freedom and Economic Well-Being**

A number of studies have linked levels of economic freedom, as measured by the index published annually in *Economic Freedom of the World*, with higher levels of economic growth and income. For example, Easton and Walker (1997) found that changes in economic freedom have a significant impact on the steady-state level of income even after the level of technology, the level of education of the workforce, and the level of investment are taken into account. The results of this study imply that economic freedom is a separate determinant of the level of income. The Fraser Institute's series, *Economic Freedom of the World*, also shows a positive relationship between economic freedom and both the level of per-capita GDP and its growth rate.

Similarly, De Haan and Sturm (2000) show that positive and negative changes in economic freedom lead to positive and negative changes in rates of economic growth. Using the index of economic freedom from Gwartney et al., 1996 and percapita GDP data for 80 countries, their results indicate that, after accounting for education level, investment, and population growth, changes in economic freedom have a significant impact on economic growth.<sup>12</sup>

The calculation of the index of the economic freedom of Canadian provinces and US states allows us to investigate, via econometric testing, the relationship between economic freedom and prosperity within North America.<sup>13</sup> To test whether there is a positive relationship between economic growth and economic freedom, we use annual observations on each of the components from 1981 to 2010. We run separate regressions for Canada and the United States to determine if economic freedom has different effects in the two nations. Because of this, we do not use the "world adjusted" index since the regressions are designed to pick up differences *within* Canada and the United States.

As the data for all US states and all Canadian provinces were used, the study is one of a defined population rather than a random sample of states and provinces, implying that the appropriate estimation technique is the fixed-effects, rather than the random-effects, model. Table 1.1 and table 1.2 show the regression results of the semi-growth models. Please note that the results of the regressions are in US dollars.

Average investment share of GDP is missing from the model because investment data for separate US states are not available.<sup>14</sup> The proxy component for human

- [13] Since the publication of the first edition of *Economic Freedom of North America* in 2002, academic articles exploring the relationship between our measure of economic freedom and other indicators such as economic growth and entrepreneurial activity have appeared. For a summary of those studies, see Appendix C (p. 71).
- [14] As already mentioned, the omission of the measure of investment does not seriously affect the coefficients on economic freedom. We tested the impact of the exclusion of the measure of investment from the model of Mankiw, Romer, and Weil (1992) enhanced by a measure of economic

<sup>[12]</sup> For a sample of empirical papers investigating the impact of economic freedom, as measured by the index published annually in Economic Freedom of the World, and economic prosperity, see <<u>http://www.freetheworld.com</u>>. For the latest summary of literature on the impact of economic freedom at an international level, see Doucouliagos and Ulubasoglu, 2006.

F	Regressions at	All-Governme	ent Level (ALLG	i)	<b>Regressions at Subnational Level (SUBN)</b>							
Dependent	Variable: Real G	)P per Capita (1	981–2010)		Dependent	Variable: Real GD	)P per Capita (1	981–2010)				
Method: Po	oled Least Squar	es			Method: Po	oled Least Squar	es					
				Car	nada							
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.			
HG	-108.84	99.62	-1.09	0.28	HG	-4.67	100.97	0.05	0.96			
ALLG	7584.07	536.67	14.13	0.00	SUBN	7678.95	547.51	14.03	0.00			
	Ad	ljusted R <sup>2</sup> : 0.	88		Adjusted R <sup>2</sup> : 0.88							
				United	States							
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.			
HG	97.88	78.79	1.24	0.21	HG	-84.19	75.08	-1.12	0.26			
ALLG	13276.47	1370.74	9.69	0.00	SUBN	7640.99	927.94	8.23	0.00			
	Ac	ljusted R <sup>2</sup> : 0.	87		Adjusted R <sup>2</sup> : 0.83							

# Table 1.1: Level of Economic Freedom and GDP per Capita

Note: HG is the number of high-school graduates 25 years and older as a percentage of total population 25 years and older from 1981 to 2010; ALLG is an economic freedom index at an all government level from 1981 to 2010; SUBN is an economic freedom index at a subnational level from 1981 to 2010.

# Table 1.2: Growth in Economic Freedom and Growth in GDP per Capita

#### **Regressions at All-Government Level (ALLG)**

Dependent Variable: Growth in Real GDP per Capita (1981–2010) Method: Pooled Least Squares

#### Regressions at Subnational Level (SUBN)

Dependent Variable: Growth in Real GDP per Capita (1981–2010) Method: Pooled Least Squares

Canada												
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.			
HGG	0.21	0.11	1.85	0.07	HGG	0.14	0.12	1.23	0.22			
POPG	0.57	0.36	1.59	0.11	POPG	0.62	0.39	1.60	0.11			
ALLGG	0.65	0.08	7.79	0.00	SUBNG	0.64	0.08	7.84	0.00			
	Ac	ljusted R <sup>2</sup> : 0.	.40		·	Ac	ljusted R <sup>2</sup> : 0.	.35				

United States													
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.				
HGG	-0.01	0.04	-0.27	0.78	HGG	-0.02	0.04	-0.58	0.56				
POPG	-0.44	0.17	-2.56	0.01	POPG	-0.13	0.16	-0.79	0.43				
ALLGG	0.97	0.09	11.12	0.00	SUBNG	0.74	0.06	12.56	0.00				
	Ad	justed R <sup>2</sup> : 0.	38			Ad	justed R <sup>2</sup> : 0.	34					

**Note:** HGG is growth in the number of high-school graduates 25 years and older as a percentage of total population 25 years and older from 1981 to 2010; POPG is growth in population from 1981 to 2010; ALLGG is growth in economic freedom at an all government level from 1981 to 2010; SUBNG is growth in economic freedom at a subnational level from 1981 to 2010.

capital in our model is not statistically significant. Since this is the case, the data have to be adjusted. The fixed-effects model captures the unobserved or ignorance effects but does not account for relevant components missing from a model. To provide some adjustment for the missing components, the data are transformed into deviations from their national means. In other words, the national mean is subtracted from each of the components. Although this transformation does not adjust for the omission of the relevant components completely, to the extent that jurisdictions within a nation are similarly affected by the same economic factors, the transformation—which reveals how each jurisdiction performs in relation to the national average—helps adjust for the impact of the missing relevant components on other explanatory components in the model.

#### Level of Economic Freedom and GDP per Capita

The results from the regression analysis in table 1.1 indicate that the degree of economic freedom has a substantial impact on per-capita GDP at a subnational and all-government level. As mentioned before, the high-school component is not significant. The reader should also note the relatively small standard errors for the economic freedom variable, both in the regression results reported here and for those reported in the section on Sensitivity Analysis (p. ). On the whole, the results are statistically significant for both the United States and Canada with a *p* value well below 1% meaning that the results are statistically significant more than 99 times out of 100.

At an all-government level, holding other components constant, an increase of one point in economic freedom in a US state will increase that state's per-capita income by US\$13,276. An increase of one point in economic freedom in a Canadian province will increase its per-capita GDP by US\$7,584 (CA\$7,963)<sup>15</sup> At a subnational level, an increase of one point in economic freedom in a US state will increase its per-capita GDP by US\$7,641, whereas an increase of one point in economic freedom in a Canadian province will increase its per-capita GDP by US\$7,679 (CA\$8,063).

While the coefficients may appear quite large, it should be noted that the overall index varies much less than its individual components, so that a one-point overall increase in economic freedom may not be as easy to achieve as it might appear at first glance. The difference in scores between the highest and lowest rated US state over the *full* period is only 3.9 points at the all-government level. Thus, a US state would have to improve its score by roughly one quarter within this range in order to achieve the one-point increase required to realize the US\$13,276 per-capita gain in income. In Canada, at the all-government level, the range is 5.2 points. At the subnational level, the range in Canada is 5.1; in the United States, it is 4.1.

freedom from Economic Freedom of the World. The exclusion does not change the estimated coefficients on economic freedom nor their standard errors significantly.

[15] The exchange rate used is \$1.05 (source: Heston, Summers, and Aten, 2011).

# Growth in Economic Freedom and Growth in GDP per Capita

Table 1.2 summarizes the results of the regression analysis used to determine the relationship between growth in economic freedom and growth in per-capita GDP at the subnational and all-government levels. The main conclusion of the regression analysis is that growth in economic freedom has a significant impact on the growth in per-capita GDP. A 1.00% increase in the growth rate of economic freedom at the all-government level (e.g., from 4.00% per year to 4.04% per year) will induce an increase of 0.97% in the growth rate of per-capita GDP for US states and an increase of 0.65% in the growth rate of per-capita GDP for Canadian provinces. A 1.00% increase in the growth rate of per-capita GDP for US states and on increase of 0.74% in the growth rate of per-capita GDP for US states and 0.64% increase in the growth rate for Canadian provinces.

#### **Sensitivity Analysis**

In order to determine the stability of the regression results in the table 1.1 and table 1.2, further testing was done using moving averages rather than annual data. These results can be found below. The use of moving averages (reported in table 1.3 and table 1.4) is important. Using annual data in regression analysis may produce misleading results because, depending on the period of study, business cycles may inflate or deflate the estimated coefficients. The data used in the regression analyses in table 1.3 and table 1.4 are smoothed out through use of a moving average, minimizing the impact of business cycles. The components are the same as before and significance levels remain high. The results are interesting in themselves in that they throw further light on the impact of fiscal federalism and the impact of economic freedom over time.

#### Results—Level of Economic Freedom and GDP per Capita

The results of the regression in table 1.3 indicate that the degree of economic freedom has a strong impact on per-capita GDP, regardless of period used for calculating the moving averages. Further, the significance of the coefficient stays extremely high, regardless of the number of periods in the moving average, at both subnational and all-government levels. The results are also consistent with the earlier finding that the degree of economic freedom has a stronger impact on US states than on the Canadian provinces.

#### Results—Growth in Economic Freedom and Growth in GDP per Capita

Finally, we examine the growth of economic freedom in relation to GDP growth. We find that the growth of economic freedom has a strong impact on economic growth, with a very high level of significance, regardless of period. The regression results in table 1.4 indicate that the estimated coefficients on the growth in economic freedom using moving average data are very similar to the regression results using annual data.

# Table 1.3: Level of Economic Freedom and GDP per Capita (Moving Averages)

	2-period moving	backward average	3-period l moving	oackward average	4-period l moving	oackward average	5-period l moving	oackward average	6-period moving	backward average				
				Canada a	t the All-Gove	rnment Leve	I							
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic				
HG	-145.54	-1.44	-177.50	-1.68	-194.13	-1.80	-209.88	-1.92	-223.68	-2.03				
ALLG	7778.26	16.52	7921.40	17.73	7877.97	18.27	7792.38	18.20	7685.82	18.13				
				Canada	at the Subna	tional Level	Level							
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient t-Statistic		Coefficient t-Statistic		Coefficient	t-Statistic				
HG	-21.37	-0.21	-48.99	-0.46	-63.84	-0.59	-79.29	-0.72	-93.84	-0.85				
SUBN	7729.64	14.45	7800.00	14.54	7738.19	14.37	7680.93	14.23	7620.85	14.33				
				United State	es at the All-G	overnment L	evel							
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic				
HG	70.92	1.01	45.07	0.80	32.32	0.68	26.75	0.64	24.94	0.70				
ALLG	13341.02	9.53	13227.12	9.58	13187.37	9.47	13147.81	9.30	13091.34	9.52				
				United Sta	tes at the Sul	onational Lev	el							
Variable	Coefficient	t-Statistic	Coefficient t-Statistic		Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic				
HG	-125.87	-1.89	-159.88	-2.95	-177.00	-3.73	-181.60	-4.10	-179.19	-4.34				
SUBN	7379.24	7.72	7098.27	7.51	6889.98	7.25	6730.79	7.01	6566.38	7.18				

Dependent Variable: Real GDP per Capita (1981–2010) Method: Pooled Least Squares

**Note:** HG is the number of high-school graduates 25 years and older as a percentage of total population 25 years and older from 1981 to 2010; ALLG is an economic freedom index at an all government level from 1981 to 2010; SUBN is an economic freedom index at a subnational level from 1981 to 2010.

0.76 14.96

0.79

15.77

### Table 1.4: Growth in Economic Freedom and Growth in GDP per Capita (Moving Averages)

Dependen	Dependent Variable: Growth in GDP per Capita GDP (1981–2010) Method: Pooled Least Squares												
	2-period backward moving average		3-period l moving	backward average	4-period l moving	backward average	5-period l moving	backward average	6-period backward moving average				
				Canada a	t the All-Gove	ernment Leve	I						
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic			
HGG	0.35	2.48	0.30 1.80		0.25	1.52	0.34	1.94	0.35	2.09			
POPG	1.09	3.61	1.51	5.89	1.71	6.88 1.80		8.10	1.93	9.28			
ALLGG	0.68	9.06	0.70	10.36	0.76	11.83	0.81	12.79	0.83	12.88			
				Canada	at the Subna	tional Level							
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic			
HGG	0.25	2.01	0.10 0.68		-0.08	-0.48	-0.03	-0.15	-0.02	-0.08			
POPG	1.27	3.95	1.57	5.89	1.80 6.67		1.93 7.88		2.09	8.71			

10.73 0.73 12.74

0.73

SUBNG

#### **United States at the All-Government Level**

0.73 13.97

Variable	Coefficient	t-Statistic								
HGG	-0.02	-0.51	-0.03	-0.53	-0.07	-1.19	-0.06	-1.00	-0.09	-1.66
POPG	-0.20	-1.32	-0.05	-0.37	-0.07	-0.46	-0.06	-0.41	0.01	0.10
ALLGG	1.19	17.28	1.39	22.75	1.52	22.61	1.63	24.03	1.62	24.81

#### **United States at the Subnational Level**

Variable	Coefficient	t-Statistic								
HGG	-0.03	-0.53	-0.07	-1.14	-0.14	-2.18	-0.14	-1.97	-0.18	-2.61
POPG	0.10	0.64	0.28	1.81	0.27	1.61	0.34	2.00	0.42	2.67
SUBNG	0.81	18.18	0.88	19.86	0.95	18.51	0.97	17.63	0.95	18.23

Note: HGG is growth in the number of high-school graduates 25 years and older as a percentage of total population 25 years and older from 1981 to 2010; POPG is growth in population from 1981 to 2010; ALLGG is growth in economic freedom at an all government level from 1981 to 2010; SUBNG is growth in economic freedom at a subnational level from 1981 to 2010.

# The Importance of Economic Freedom

In this publication, we have focused on the measurement of economic freedom and on empirical testing of the impact of economic freedom. However, the reader may wonder why economic freedom is so clearly related to growth and prosperity a finding not just of this paper but also of many other empirical explorations of economic freedom. Throughout the twentieth century there was vigorous debate about whether planned or free economies produce the best outcomes. In many ways, this debate goes back to the beginnings of modern economics when Adam Smith famously argued that each of us, freely pursuing our own ends, create the wealth of nations and of the individual citizens.

The results of the experiments of the twentieth century should now be clear: free economies produce the greatest prosperity in human history for their citizens. Even poverty in these economically free nations would have been considered luxury in unfree economies. This lesson was reinforced by the collapse of centrally planned states and, following this, the consistent refusal of their citizens to return to central planning, regardless of the hardships on the road to freedom. Among developing nations, those that adopted the centrally planned model have only produced lives of misery for their citizens. Those that adopted the economics of competitive markets have begun to share with their citizens the prosperity of advanced market economies.

While these comparisons are extreme examples, from opposite ends of the spectrum of economic freedom, a considerable body of research shows that the relationship between prosperity and economic freedom holds in narrower ranges of the spectrum. While sophisticated econometric testing backs up this relationship, examples are also interesting. In the United States, the relatively free Georgia does much better than the relatively unfree West Virginia. In Canada, British Columbia, where economic freedom has been increasing in recent years, has been experiencing considerably greater growth on a per-capita basis than Ontario, where economic freedom in Contario increased at a much faster pace than in British Columbia. During that period, Ontario's economic growth outpaced that of British Columbia. As with anything in the real world, exceptions can be found but overall the strength of the statistical fit of this relationship is remarkable.

While this is hardly the place to review several centuries of economic debate, the mechanics of economic freedom are easy to understand. Any transaction freely entered into must benefit both parties; any transaction that does not benefit both parties would be rejected by the party that would come up short. This has consequences throughout the economy. Consumers who are free to choose will only be attracted by superior quality and price. Producers must constantly improve the price and quality of their products to meet customers' demands or customers will not freely enter into transactions with them. Many billions of mutually beneficial transactions occur every day, powering the dynamic that spurs increased productivity and wealth throughout the economy. Restrictions on freedom prevent people from making mutually beneficial transactions. Such free transactions are replaced by government action. This is marked by coercion in collecting taxes and lack of choice in accepting services: instead of gains for both parties arising from each transaction, citizens must pay whatever bill is demanded in taxes and accept whatever service is offered in return. Moreover, while the incentives of producers in a competitive market revolve around providing superior goods and services in order to attract consumers, the public sector faces no such incentives. Instead, as public-choice theory reveals, incentives in the public sector often focus on rewarding interest groups, seeking political advantage, or even penalizing unpopular groups. This is far different from mutually beneficial exchange although, as noted earlier, government does have essential protective and productive functions.

In some ways it is surprising the debate still rages because the evidence and theory favoring economic freedom match intuition: it makes sense that the drive and ingenuity of individuals will produce better outcomes through the mechanism of mutually beneficial exchange than the designs of a small coterie of government planners, who can hardly have knowledge of everyone's values and who, being human, are likely to consider first their own well-being and that of the constituencies they must please when making decisions for all of us.

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# Chapter 2 Detailed Tables of Economic Freedom in Canada and the United States

The following tables provide more information on economic freedom in the provinces and states as measured by the index of economic freedom in North America at the all-government and the subnational levels. At the all-government level, the index measures the impact of all levels of government—federal, provincial/state, and municipal/local—in Canada and the United States. At the subnational level, it measures the impact of provincial and municipal governments on economic freedom in Canada and state and local governments in the United States.

#### **Economic Freedom in Canada and the United States**

Table 2.1a and 2.1b and table 2.2 provide a detailed summary of the scores for 2010. Tables 2.3 to 2.10 provide historical information both for the overall index and for each of Area 1: Size of Government; Area 2: Takings and Discriminatory Taxation; and Area 3: Labor Market Freedom. Economic freedom is measured on a scale from zero to 10, where a higher value indicates a higher level of economic freedom. Detailed data for the adjusted scores are not included but can be found in *Gwartney, Lawson and Hall, 2012.*<sup>1</sup> All the data included in this report are available on our website, <<u>http://www.freetheworld.com></u>.

<sup>[1]</sup> Gwartney, James, Robert Lawson, and Joshua Hall (2012). *Economic Freedom of the World: 2012 Annual Report.* Fraser Institute.

	Overall index	Area 1	Area 2	Area 3	1A	1B	1C	2A	2B	2C	2D	3Ai	3Aii	3Aiii
Alberta	7.6	9.0	7.1	6.7	9.3	8.5	9.2	5.4	6.0	9.0	7.8	8.3	7.4	4.3
British Columbia	6.0	7.3	5.1	5.5	7.2	7.1	7.8	3.8	5.0	7.6	4.1	6.5	6.9	3.1
Manitoba	5.2	6.6	5.0	4.0	5.9	6.0	8.0	4.2	4.0	7.6	4.2	5.6	2.2	4.3
New Brunswick	5.0	5.4	4.9	4.7	4.2	6.2	5.9	3.6	5.0	7.4	3.6	5.2	3.4	5.6
Newfoundland & Labrador	5.7	7.0	6.1	4.0	7.6	7.4	6.0	5.9	5.0	9.0	4.4	6.6	0.6	4.8
Nova Scotia	4.5	5.1	4.0	4.4	2.7	6.7	6.0	3.1	2.0	7.6	3.2	4.6	2.8	5.7
Ontario	5.7	7.3	4.7	5.2	6.6	7.3	7.9	2.9	4.0	7.3	4.5	5.3	5.9	4.5
Prince Edward Island	4.1	4.3	4.0	4.0	2.6	5.9	4.4	2.5	4.0	7.4	1.9	4.3	2.4	5.3
Quebec	4.7	6.2	3.6	4.1	6.0	5.3	7.4	1.4	3.0	6.5	3.5	4.9	4.8	2.7
Saskatchewan	6.2	7.9	6.0	4./	8.1	7.1	8./	5.3	5.0	8.0	5.6	7.4	2.0	4.8
Alabama	6.0	4.8	6.7	6.6	4.1	7.7	2.5	7.3	7.0	5.5	7.2	5.8	5.8	8.1
Alaska	6.8	5.9	8.2	6.2	3.5	7.2	7.0	8.4	8.0	7.4	8.9	8.7	3.6	6.3
Arizona	6.6	6.2	6.2	7.4	6.3	7.8	4.6	6.3	6.0	5.7	6.9	6.4	8.4	7.4
Arkansas	6.0	5.2	5.7	7.1	6.0	7.0	2.7	5.9	5.0	6.0	5.8	5.6	6.9	8.7
California	6.6	7.2	5.8	6.9	6.9	8.5	6.0	5.7	4.0	6.0	7.5	7.2	7.9	5.4
Colorado	7.2	7.3	6.8	7.7	7.0	8.9	5.9	7.1	6.0	6.3	7.7	7.7	7.5	7.8
Connecticut	6.9	7.1	6.4	7.4	5.9	8.9	6.3	5.6	6.0	5.6	8.3	8.3	8.4	5.4
Delaware	7.8	8.2	7.3	7.8	9.1	8.9	6.7	8.7	6.0	4.7	9.7	9.0	7.5	6.9
Florida	6.5	6.1	5.9	7.6	5.9	8.6	3.8	5.2	8.0	3.6	6.8	6.4	8.9	7.4
Georgia	7.1	6.7	7.1	7.6	6.6	8.4	5.2	7.7	6.0	7.3	7.5	6.7	7.5	8.5
Hawaii	5.8	5.6	5.7	6.2	3.7	8.3	4.9	7.2	4.0	5.7	5.8	7.5	5.1	5.8
Idano	6.5	5.8	6./	6.9	6.0	/./	3.8	7.8	5.0	6.3	7.5	5./	7.1	7.9
lilinois	/.1	7.3	6.8	7.1	7.8	8.7	5.3	6./	7.0	5.4	8.3	/.1	8.5	5.6
Indiana	6.9	6.8	6.6	7.2	7.1	8.3	4.9	6.3	7.0	5.9	7.3	6.8	8.0	6./
lowa	6.9	6.8	6.8	7.2	7.2	8.1	5.2	7.5	6.0	6.0	7.6	7.3	7.6	6.6
Kansas Kontuslu	6.8	6.6	6.5	7.2	6.2 2.7	8.6	5.0	6.9	6.0	6.1	7.2	/.1	6.2	8.3 7 7
Leuisiana	5.9 7.0	4.0	0.1	0.9	3./ 6.0	7.4	2.8 E.6	5.9 7 0	0.0 7.0	4.7	1.1	0.1	7.0	7.7
Louisidiid	7.0	0.Z	7.Z	7.0	0.0 5 0	7.1	5.0 5.1	7.0 E 2	7.0	1.5	0.7	7.5	0.2	9.1
Manuland	5.9	5.0	5.7	0.0	3.Z	0.0 Q 1	53	5.5 5.5	6.0	4.Z	7.4 8.3	0.1	63	0.7 7 /
Massachusetts	6.8	67	6.1	7.2	6.8	7.8	5.5	5.0	6.0	5.2	8.4	7.7	8.9	5.5
Michigan	6.2	5.7	6.2	66	63	7.8	2.9	6.6	6.0	53	6.9	62	8.2	5.5
Minnesota	6.9	73	6.0	73	7.6	85	57	6.2	5.0	5.5	79	77	8.4	5.7
Mississinni	5.6	43	5.9	66	4.0	63	2.6	6.9	6.0	43	64	5.1	5.0	96
Missouri	6.4	5.7	6.5	7.1	5.4	7.7	4.1	6.0	7.0	5.3	7.7	6.6	7.4	7.3
Montana	5.8	4.8	6.2	6.4	5.3	6.2	2.8	5.9	6.0	3.4	9.5	5.9	6.1	7.2
Nebraska	7.1	7.4	6.5	7.3	7.6	8.4	6.1	7.1	6.0	5.1	7.8	7.6	6.9	7.4
Nevada	7.3	7.6	7.2	7.0	8.4	9.2	5.2	7.7	8.0	5.9	7.3	6.8	9.0	5.2
New Hampshire	7.0	7.1	6.5	7.5	7.4	8.7	5.1	5.6	8.0	3.0	9.4	7.2	9.1	6.2
New Jersey	6.5	7.1	5.1	7.2	7.1	9.0	5.3	3.5	5.0	4.0	7.9	8.1	8.1	5.5
New Mexico	5.5	4.3	5.6	6.5	2.8	6.4	3.6	6.6	6.0	3.6	6.3	6.0	4.3	9.2
New York	6.5	6.9	5.9	6.6	7.0	7.9	5.7	5.3	5.0	5.6	7.7	8.4	7.4	4.1
North Carolina	7.0	6.7	6.8	7.6	7.3	8.2	4.8	8.1	5.0	6.3	7.7	7.0	6.8	8.9
North Dakota	6.6	6.4	6.2	7.3	7.2	6.1	5.7	6.5	6.0	4.9	7.5	7.8	5.5	8.7
Ohio	6.3	5.9	6.0	7.0	6.5	7.9	3.3	5.4	6.0	4.9	7.6	6.6	8.2	6.1
Oklahoma	6.7	6.0	7.2	7.0	6.2	7.8	3.8	8.6	6.0	7.4	6.9	6.3	5.3	9.2
Oregon	6.6	6.4	6.8	6.6	7.4	8.0	3.8	7.2	5.0	5.1	9.7	6.3	7.6	5.8
Pennsylvania	6.4	5.8	6.2	7.1	5.7	8.0	3.6	5.5	7.0	4.2	8.0	7.1	8.9	5.5
Rhode Island	6.0	5.8	5.2	7.1	6.2	7.4	3.8	4.7	5.0	3.3	7.8	7.2	9.2	5.0
South Carolina	6.1	5.2	6.2	7.0	5.0	7.8	2.7	7.0	5.0	5.1	7.6	5.7	6.8	8.6
South Dakota	7.2	6.8	7.2	7.6	7.6	7.1	5.7	8.1	8.0	6.0	6.8	7.5	6.6	8.6
lennessee	6.8	6.0	6.8	7.5	6.2	/./	4.3	7.1	8.0	6.0	6.2	6.5	7.8	8.1
Iexas	7.5	7.5	/.3	1./	/.4	8.7	6.4	7.9	8.0	5.8	7.4	/.4	7.5	8.1
Utan	/.0	/.1	6.7	/.2	6.8	8.4	6.2	/.5	6.0	5.6	1.7	6.6	/.1	8.0
vermont	5.8	5.0	5.5	6.8	4./	5.9	4.3	5.3	5.0	3.7	8.1	5.9	/.8	6.5
virginia Washington	6.9	6.2	6./	1.1	3.9	9.1	5.5	0.8	6.0	5.4	8.6	7.9	0.4	8.9
Washington	0.5	6.8	6.2	6.4	/.1	ŏ.ک	5.0	6.4	8.0	4.4	5.9	0.8	7.1	5.2
west virginia	5.4	4.3	5.9	0.0	4./	0.8	1.3	6.0	6.0	3.9	7.0	5.6	5.1	1.3
Wisconsin Wisconsin a	0.4 7.2	6.3	5.8	7.0	0.3	8.2	4.4	0.0	5.0	4.5	1./	6.9	8.2	6.0
vvyonning	1.5	7.4	7.0	7.4	/.J	7.9	0./	7.5	ö.U	0.C	7.1	ö.9	3.Z	10.0

Table 2.1a: Scores at the Federal, State/Provincial, and Local/Municipal Levels, 2010

	Overall adjusted index	Area 1: Size of government	Area 2: Takings and discriminatory taxation	Area 3: Regulation	Component 3A: Labor market freedom	Component 3B: Regulation of credit markets	Component 3C: Business regulations	Area 4: Legal system and property rights	Rank
Alberta	8.1	9.0	7.1	8.0	6.7	9.3	8.0	8.2	1
British Columbia	7.1	7.3	5.1	7.6	5.5	9.3	8.0	8.2	10
Manitoba	6.7	6.6	5.0	7.1	4.0	9.3	8.0	8.2	32
New Brunswick	6.5	5.4	4.9	7.3	4.7	9.3	8.0	8.2	45
Newfoundland & Labrador	7.1	7.0	6.1	7.1	4.0	9.3	8.0	8.2	9
Nova Scotia	6.1	5.1	4.0	7.2	4.4	9.3	8.0	8.2	56
Ontario	6.9	7.3	4.7	7.5	5.2	9.3	8.0	8.2	21
Prince Edward Island	5.9	4.3	4.0	7.1	4.0	9.3	8.0	8.2	60
Quebec	6.3	6.2	3.6	7.1	4.1	9.3	8.0	8.2	50
Saskatchewan	7.4	7.9	6.0	7.3	4.7	9.3	8.0	8.2	3
Alabama	6.4	4.8	6.7	6.9	6.6	6.9	7.3	7.1	46
Alaska	7.0	5.9	8.2	6.8	6.2	6.9	7.3	7.1	15
Arizona	6.7	6.2	6.2	7.2	7.4	6.9	7.3	7.1	35
Arkansas	6.3	5.2	5.7	7.1	7.1	6.9	7.3	7.1	51
California	6.8	7.2	5.8	7.0	6.9	6.9	7.3	7.1	30
Colorado	7.1	7.3	6.8	7.3	7.7	6.9	7.3	7.1	7
Connecticut	6.9	7.1	6.4	7.2	7.4	6.9	7.3	7.1	20
Delaware	7.5	8.2	7.3	7.3	7.8	6.9	7.3	7.1	2
Florida	6.6	6.1	5.9	7.3	7.6	6.9	7.3	7.1	39
Georgia	7.0	6.7	7.1	7.3	7.6	6.9	7.3	7.1	12
Hawaii	6.3	5.6	5.7	6.8	6.2	6.9	7.3	7.1	48
Idaho	6.7	5.8	6.7	7.0	6.9	6.9	7.3	7.1	36
Illinois	7.1	7.3	6.8	7.1	7.1	6.9	7.3	7.1	11
Indiana	6.9	6.8	6.6	7.1	7.2	6.9	7.3	7.1	22
lowa	7.0	6.8	6.8	7.1	7.2	6.9	7.3	7.1	18
Kansas	6.8	6.6	6.5	7.1	7.2	6.9	7.3	7.1	24
Kentucky	6.2	4.6	6.1	7.0	6.9	6.9	7.3	7.1	54
Louisiana	7.0	6.2	7.2	7.3	7.6	6.9	7.3	7.1	19
Maine	6.2	5.0	5.7	7.0	6.8	6.9	7.3	7.1	53
Maryland	6.5	5.7	6.2	7.1	7.2	6.9	7.3	7.1	42
Massachusetts	6.8	6.7	6.1	7.2	7.4	6.9	7.3	7.1	29
Michigan	6.5	5.7	6.2	6.9	6.6	6.9	7.3	7.1	44
Minnesota	6.9	7.3	6.0	7.2	7.3	6.9	7.3	7.1	23
Mississippi	6.1	4.3	5.9	6.9	6.6	6.9	7.3	7.1	57
Missouri	6.6	5.7	6.5	7.1	7.1	6.9	7.3	7.1	38
Montana	6.2	4.8	6.2	6.9	6.4	6.9	7.3	7.1	52
Nebraska	7.0	7.4	6.5	7.2	7.3	6.9	7.3	7.1	13
Nevada	7.3	7.6	7.2	7.1	7.0	6.9	7.3	7.1	5
New Hampshire	7.0	7.1	6.5	7.2	7.5	6.9	7.3	7.1	16
New Jersey	6.6	7.1	5.1	7.1	7.2	6.9	7.3	7.1	37
New Mexico	6.0	4.3	5.6	6.9	6.5	6.9	7.3	7.1	59
New York	6.7	6.9	5.9	6.9	6.6	6.9	7.3	7.1	34
North Carolina	7.0	6.7	6.8	7.3	7.6	6.9	7.3	7.1	17
North Dakota	6.7	6.4	6.2	7.2	7.3	6.9	7.3	7.1	33
Ohio	6.5	5.9	6.0	7.1	7.0	6.9	7.3	7.1	43
Oklahoma	6.8	6.0	7.2	7.1	7.0	6.9	7.3	7.1	25
Oregon	6.8	6.4	6.8	6.9	6.6	6.9	7.3	7.1	27
Pennsylvania	6.5	5.8	6.2	7.1	7.1	6.9	7.3	7.1	41
Rhode Island	6.3	5.8	5.2	7.1	7.1	6.9	7.3	7.1	49
South Carolina	6.4	5.2	6.2	7.1	7.0	6.9	7.3	7.1	47
South Dakota	7.1	6.8	7.2	7.3	7.6	6.9	7.3	7.1	8
Tennessee	6.8	6.0	6.8	7.2	7.5	6.9	7.3	7.1	28
Texas	7.3	7.5	7.3	7.3	7.7	6.9	7.3	7.1	4
Utah	7.0	7.1	6.7	7.1	7.2	6.9	7.3	7.1	14
Vermont	6.1	5.0	5.5	7.0	6.8	6.9	7.3	7.1	55
Virginia	6.8	6.2	6.7	7.3	7.7	6.9	7.3	7.1	26
Washington	6.7	6.8	6.2	6.9	6.4	6.9	7.3	7.1	31
West Virginia	6.0	4.3	5.9	6.7	6.0	6.9	7.3	7.1	58
Wisconsin	6.6	6.3	5.8	7.1	7.0	6.9	7.3	7.1	40
Wyoming	7.2	7.4	7.0	7.2	7.4	6.9	7.3	7.1	6

# Table 2.1b: World-Adjusted Scores at the Federal, State/Provincial, and Local/Municipal Levels, 2010

www.freetheworld.com / www.fraserinstitute.org / Fraser Institute

	Overall Index	Area 1	Area 2	Area 3	1A	1B	10	2A	2B	2C	2D	3Ai	3Aii	3Aiii
Alberta	7.6	8.5	8.4	5.9	7.4	8.5	9.4	8.3	7.0	8.9	9.5	6.7	6.9	4.3
British Columbia	6.1	7.0	6.2	5.0	5.9	7.9	7.2	5.3	6.5	7.8	5.2	5.3	6.7	3.1
Manitoba	5.5	7.1	5.7	3.8	4.9	8.0	8.4	4.6	5.5	7.9	4.7	4.5	2.6	4.3
New Brunswick	5.5	6.3	5.7	4.5	3.6	7.5	7.7	4.3	6.5	7.9	4.2	4.2	3.6	5.6
Newfoundland & Labrador	5.7	7.0	6.8	3.4	4.5	8.9	7.4	6.7	6.5	9.3	4.8	5.3	0.2	4.8
Nova Scotia	5.1	6.1	4.9	4.2	3.9	8.5	6.0	3.6	4.0	8.0	3.9	3.7	3.2	5.7
Ontario	5.7	6.8	5.5	4.9	5.8	7.7	6.8	3.7	5.5	7.3	5.3	4.2	6.1	4.5
Prince Edward Island	5.2	6.4	5.0	4.3	2.9	7.9	8.4	4.0	5.5	8.4	2.1	3.4	4.2	5.3
Quebec	4.4	5.6	4.1	3.7	5.1	5.6	6.0	0.8	5.5	6.1	4.1	4.0	4.3	2.7
Saskatchewan	6.1	7.8	6.5	3.9	6.3	8.6	8.6	5./	6.5	7.5	6.2	6.0	1.0	4.8
Alabama	7.0	5.9	7.2	8.0	3.9	8.5	5.2	7.1	8.0	7.4	6.3	10.0	6.1	8.1
Alaska	6.5	4.8	8.7	6.0	2.0	8.2	4.3	9.1	10.0	7.2	8.6	7.0	4.7	6.3
Arizona	6.7	6.7	6.5	7.0	5.8	9.0	5.2	6.0	8.0	6.1	5.8	5.1	8.6	7.4
Arkansas	6.2	5.9	5.9	6.9	4.4	8.5	4.9	5.7	6.0	7.7	4.3	5.3	6.6	8.7
California	5.7	5.4	5.3	6.3	5.3	7.5	3.5	4.9	4.0	5.5	6.7	5.8	7.8	5.4
Colorado	7.0	6./	7.1	7.2	6.5	9.4	4.3	/.3	7.0	7.0	6.9	6.2	7.6	7.8
Connecticut	6.6	6.9	6.4	6./	7.2	9.1	4.3	5.3	7.0	5.4	/./	6./	8.0	5.4
Delaware	1.1	7.8	8.1	7.1	/.3	8.9	7.1	9.1	6.5	7.2	9.7	7.2	7.2	6.9
Florida	6.5 7 1	6.5	6.0	7.1	5.1	8.8	5.5	5.3	10.0	3.0	5.8	5.1	8.9	7.4
Hawaii	5.0	6.3	5.1	63	5.0	0.7	2.5	5.2	0.0	7.5	0.7	6.1	7.0	0.0 5.0
Idaho	6.2	6.0	60	6.5	4.8	8.8	4.5	5.8		63	 6.8	4 5	7.0	79
Illinois	6.4	6.1	6.6	6.5	6.3	9.3	2.7	6.0	8.0	4.4	7.8	5.7	8.3	5.6
Indiana	6.8	6.8	6.9	6.6	6.0	8.4	5.8	6.7	8.0	6.7	6.4	5.5	7.7	6.7
lowa	6.6	6.5	6.8	6.5	5.5	8.2	5.8	6.6	7.5	6.1	6.8	5.9	7.1	6.6
Kansas	6.6	6.8	6.2	6.6	5.5	9.4	5.5	6.1	6.0	6.6	6.3	5.7	5.9	8.3
Kentucky	6.1	5.0	6.6	6.5	4.8	7.4	2.8	6.2	6.5	6.7	7.0	4.9	7.0	7.7
Louisiana	7.2	6.2	7.2	8.3	4.6	8.5	5.6	7.2	8.0	8.0	5.6	10.0	5.7	9.1
Maine	5.7	5.3	5.3	6.5	3.0	7.9	5.1	3.7	7.0	4.0	6.6	4.9	7.9	6.7
Maryland	6.8	6.2	6.7	7.4	5.6	7.2	5.8	5.6	7.0	6.4	7.9	6.2	8.5	7.4
Massachusetts	6.5	6.1	6.7	6.9	6.2	9.1	2.9	5.7	7.0	6.0	7.9	6.3	8.8	5.5
Michigan	5.6	4.7	5.9	6.1	4.2	8.2	1.6	5.1	8.0	4.7	5.9	4.9	7.9	5.5
Minnesota	6.3	5.8	6.1	7.0	5.6	7.6	4.3	5.7	5.5	6.0	7.2	7.3	8.1	5.7
Mississippi	6.4	5.1	5.9	8.1	1.9	9.0	4.4	5.6	7.0	5.8	5.2	10.0	4.7	9.6
Missouri	6./	6.5	7.1	6.7	5.6	9.0	4.9	6.8	8.0	6.5 2.4	6.9	5.3	7.5	7.3
Nohracka	0.0 7.0	5.Z 7 7	6.5	6.7	5.5 6.1	0.0	5.0 7.0	5.0	6.0	5.4 6.2	9.0 7.0	4.7	6.7	7.2
Neulaska	6.7	67	6.8	6.5	7.2	9.5	7.0	6.8	10.0	0.2	7.Z	5.5	0.7 8 0	7.4
New Hamnshire	7 1	7.0	73	7.0	5.7	9.2 8.7	5.0	6.9	10.0	2.7	9.4	5.8	8.8	6.2
New Jersev	5.7	5.3	5.2	6.6	5.4	8.4	2.1	4.0	6.0	3.6	7.3	6.5	7.8	5.5
New Mexico	5.7	4.8	6.1	6.3	2.3	8.4	3.8	5.8	7.0	6.7	5.0	4.8	4.8	9.2
New York	5.5	5.2	5.2	6.0	4.5	8.3	2.8	3.0	6.0	4.9	6.9	6.8	7.1	4.1
North Carolina	6.9	6.7	6.8	7.0	6.2	9.0	5.0	7.1	5.5	7.7	7.0	5.7	6.5	8.9
North Dakota	6.9	7.0	7.0	6.8	6.1	7.6	7.2	7.4	8.0	6.0	6.7	6.3	5.5	8.7
Ohio	5.5	4.2	6.0	6.5	4.8	7.5	0.2	4.6	8.0	4.6	6.9	5.3	8.0	6.1
Oklahoma	6.8	6.5	7.1	6.6	5.4	8.7	5.5	7.6	7.0	7.9	5.9	5.1	5.5	9.2
Oregon	6.2	5.0	7.5	6.1	5.3	8.5	1.2	7.5	7.0	5.9	9.8	5.1	7.4	5.8
Pennsylvania	6.1	5.2	6.4	6.7	5.0	8.4	2.3	5.2	8.0	4.9	7.4	5.7	9.0	5.5
Rhode Island	5.5	4.7	4.9	6.7	4.6	8.8	0.8	4.3	5.0	3.2	7.1	5.8	9.5	5.0
South Carolina	6.5	4.8	6.3	8.4	3.8	6.5	4.0	6.6	6.0	5.8	6.9	10.0	6.5	8.6
South Dakota	/./	7.9	7.9	1.2	/.1 E.O	9.1	/.6	8.8	10.0	7.2	5.8	6.1 10.0	6.9	8.6
Terrac	7.7	6.9 7 5	7.5	8.6 7.2	5.9	8.2	6./	7.8	10.0	7.5	4.9	10.0	7.8 7.2	8.1 0.1
iexas Litab	1.5	7.5 6 F	7.ð 7.7	7.2	0.8 6.2	9.5	0.5	0.4 7 1	70	0.0 7 <i>6</i>	0.0	0.U	7.3 7.6	0.1 0 0
Vermont	0.9 5 3	0.5 4 7	7.Z 4.0	7.0 6.4	0.5 7 2	7.0 6.4	0.3 5 5	7.1 3.7	7.0	7.0 2 2	7.0	כ.כ ⊿ ג	7.0 7.9	0.U 6 5
Virginia	5.5 7 4	/ 7 4	7.2 7.2	77	2.5 7 0	8.0	5.5 7 0	5./ 7 0	7.0	∠.3 63	7.0 8 3	- <del>1</del> .0 6.4	7.0	89
Washington	6.1	5.8	6.6	6.0	6.4	7.6	3.4	6.4	10.0	5.7	4.4	5.5	7.2	5.2
West Virginia	5.7	5.4	5.9	5.7	3.3	8.5	4.4	4.9	6.5	5.3	7.0	4.5	5.4	7.3
Wisconsin	5.9	5.5	5.7	6.4	4.8	8.7	3.0	5.0	6.0	5.0	7.0	5.6	7.8	6.0
Wyoming	7.0	6.6	7.3	7.0	4.9	9.2	5.7	7.4	10.0	5.6	6.1	8.0	3.0	10.0

Table 2.2: Scores at the State/Provincial and Local/Municipal Levels, 2010
	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	2010 adjusted	Adjusted rank
Alberta	6.9	6.3	6.1	6.9	7.4	7.8	7.9	8.0	7.6	7.6	8.1	1
British Columbia	5.2	5.2	5.0	4.9	5.4	6.1	6.1	6.2	6.0	6.0	7.1	10
Manitoba	5.1	4.6	4.3	4.8	5.0	5.2	5.4	5.4	5.2	5.2	6.7	32
New Brunswick	2.8	4.2	3.8	4.4	5.0	5.2	5.2	5.1	5.0	5.0	6.5	45
Newfoundland & Labrador	3.4	3.3	2.9	3.1	4.4	6.0	6.4	6.4	5./	5.7	7.1	9
Nova Scotia	2.8	4.0	4.0	4.2	4.8	4.8	4.8	4.8	4.6	4.5	6.1	56
Unitario Dringo Edward Island	5.0 2.0	5./ 2.0	5.Z	5.4	6.0	0.0	0.0	5.9	5.8 4 1	5./ 4 1	6.9 E 0	21
	5.9 4 7	5.0 1 1	5.4 4.0	4.0	4.0	4.5 1 7	4.5 1 Q	4.5 4.8	4.1	4.1	5.9	50
Saskatchewan	4.2 5 1	4.4	4.0	4.5 5.2	4.7 5.2	4.7 5.7	4.0	4.0	4.7	6.2	0.5 7.4	3
Alahama	5.4	6.0	6.5	6.6	6.4	66	6.5	6.4	6.0	6.0	64	
Alaska	7.0	6.9	7.1	7.2	6.4	7.0	7.1	7.2	6.5	6.8	7.0	15
Arizona	5.8	6.4	6.6	7.0	7.2	7.2	7.0	6.8	6.6	6.6	6.7	35
Arkansas	5.6	6.0	6.6	6.7	6.5	6.5	6.4	6.3	6.1	6.0	6.3	51
California	5.8	6.4	6.8	6.7	6.8	7.0	6.9	6.7	6.6	6.6	6.8	30
Colorado	6.3	6.6	7.0	7.3	7.6	7.7	7.5	7.5	7.3	7.2	7.1	7
Connecticut	5.9	6.9	7.4	7.2	7.2	7.3	7.3	7.1	7.0	6.9	6.9	20
Delaware	6.5	7.2	8.0	7.9	8.2	8.1	8.2	7.7	7.8	7.8	7.5	2
Florida	5.4	6.4	6.7	6.6	6.9	6.9	6.9	6.7	6.6	6.5	6.6	39
Georgia	5.9	6.8	7.3	7.3	7.5	7.5	7.5	7.4	7.2	7.1	7.0	12
Hawaii	5.4	6.1	6.7	6.2	6.2	6.4	6.3	6.1	5.6	5.8	6.3	48
Idaho	5.8	5.9	6.4	6.7	6.6	6.9	7.0	6.8	6.4	6.5	6.7	36
IIIInois In diana	5.8	6./	7.2	/.1	7.2	7.3	/.3	7.1	6.9	7.1	/.1	11
Indiana	5.8	6.5 6.1	7.0	7.2	7.3 6.0	/.3 7.2	7.3	7.0	6./	6.9	6.9 7.0	10
luwa Kansas	5.9	6.4	6.7	6.8	6.9	7.5	7.4	7.0	6.6	6.8	6.8	74
Kentucky	5.8	6.2	6.7	6.8	6.6	66	66	6.1	5.9	5.9	6.2	24 54
Louisiana	6.9	6.9	7.3	7.1	6.8	7.1	7.3	7.2	6.9	7.0	7.0	19
Maine	5.0	5.7	6.0	6.0	6.2	6.1	6.1	5.9	5.7	5.9	6.2	53
Maryland	5.1	6.0	6.5	6.5	6.6	6.5	6.7	6.6	6.4	6.3	6.5	42
Massachusetts	5.7	6.7	7.0	7.0	7.1	7.2	7.1	6.8	6.6	6.8	6.8	29
Michigan	5.4	6.1	6.6	6.7	6.9	6.7	6.5	6.2	6.0	6.2	6.5	44
Minnesota	5.9	6.4	6.7	6.8	7.1	7.2	7.0	7.0	6.8	6.9	6.9	23
Mississippi	5.0	5.6	6.1	6.2	5.8	5.2	5.8	5.7	5.5	5.6	6.1	57
Missouri	5.5	6.3	6.9	6.9	7.0	7.0	6.8	6.7	6.5	6.4	6.6	38
Montana	5.6	5.3	5.7	5.7	5.8	6.4	6.3	6.2	5.7	5.8	6.2	52
Nebraska	6.0	6.4	7.0	7.2	7.1	7.3	7.4	7.1	7.1	7.1	7.0	13
Nevada	5.9	6.5	7.1	7.1	7.4	7.6	7.6	7.5	7.4	7.3	7.3	5
New Hampshire	5.9	/.I	7.4	7.5 6.7	7.5	7.5	7.5 6.7	7.1 6.6	7.0	7.0 6.5	7.0	10
New Mexico	5.5	5.6	6.0	6.3	6.0	6.2	6.1	5.7	0.4 5.4	5.5	6.0	50
New York	5.5	6.0	6.4	6.4	6.5	6.7	6.6	6.5	5.4 6.4	6.5	6.7	34
North Carolina	6.3	7.0	7.4	7.3	7.5	7.5	7.4	7.2	7.0	7.0	7.0	17
North Dakota	6.1	5.6	5.9	6.7	6.2	6.8	6.9	6.9	6.5	6.6	6.7	33
Ohio	5.6	6.2	6.6	6.7	6.8	7.0	6.5	6.5	6.2	6.3	6.5	43
Oklahoma	6.4	6.3	6.5	6.5	6.5	6.9	7.0	7.1	6.7	6.7	6.8	25
Oregon	5.4	5.9	6.3	6.9	6.8	7.2	7.1	6.9	6.5	6.6	6.8	27
Pennsylvania	5.1	6.0	6.7	6.6	6.8	6.8	6.6	6.5	6.4	6.4	6.5	41
Rhode Island	5.1	5.9	6.2	6.0	6.2	6.5	6.3	6.1	5.9	6.0	6.3	49
South Carolina	5.6	6.4	6.8	6.8	6.8	5.9	6.6	6.4	6.1	6.1	6.4	47
South Dakota	5.5	6.2	6.8	7.1	7.2	7.2	7.2	7.4	7.1	7.2	7.1	8
lennessee	5.6	6.5	7.1	7.1	7.2	7.3	7.2	7.0	6.7	6.8	6.8	28
lexas	7.0	7.2	7.5	7.5	7.6	7.8	7.9	7.7	7.4	7.5	7.3	4
Utan	5.7	6.2	6.9	7.2	/.3	/.6	/.6	/.3	/.1	/.0	/.0	14
Vermont	5.5	6.I	6./	6.5	6.3 7 2	6.2	6.0	6.0	5./	5.8	6.1	55
viryIIIId Washington	5.5 5.2	0.4 5 0	0.9	6.4	1.2	1.Z	1.2	7.0	0./	0.9	0.8 6 7	∠0 21
West Virginia	5.5 4.6	5.9 1 0	5.5	0.4 5.6	5 2	0.7 5 Q	0.0 5 7	5.5	0.5 5 /	0.5 5 /	6.0	52
Wisconsin	- <del>1</del> .0 5.5	4.7 60	5.5	5.0 6.8	5.5 6.8	5.0 6.9	5.7	5.5	5. <del>4</del> 6.2	5.4 6.4	6.6	20 20
Wyoming	5.5 7 1	6.6	0.0 7 3	7.2	6.7	73	73	7.4	7.2	0.4 7 २	7.2	-10
Try String	7.1	0.0	1.5	1.2	0.7		7.5	7.7	/.2	7.5	/ .2	0

# Table 2.3: Overall Scores at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2010, Adjusted Score for 2010, and Adjusted Rank out of 60 for 2010

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	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank
Alberta	7.0	5.9	6.0	6.9	7.2	7.9	7.9	7.9	7.6	7.6	4
British Columbia	5.0	4.8	5.0	4.6	5.3	6.2	6.2	6.2	6.0	6.1	39
Manitoba	5.4	4.7	4.3	4.8	5.1	5.5	5.6	5.5	5.5	5.5	53
New Brunswick	4.3	4.5	4.2	4.8	5.4	5.6	5.5	5.3	5.4	5.5	54
Newfoundland & Labrador	3.6	3.6	3.4	3.2	4.7	6.0	6.4	6.6	5.7	5.7	44
Nova Scotia	4.3	4.8	4.7	4.9	5.4	5.4	5.3	5.3	5.1	5.1	59
Ontario	5.9	5.7	4.9	5.0	5.9	6.0	5.9	5.8	5.7	5.7	47
Prince Edward Island	4.5	4.8	4.4	4.8	4.9	5.3	5.2	5.2	5.2	5.2	58
Quebec	4.1	3.9	3.6	3.8	4.3	4.5	4.5	4.5	4.4	4.4	60
Saskatchewan	4.9	4.4	4.0	4.8	4.9	5./	6.0	6.5	6.0	6.1	38
Alabama	7.6	7.7	7.7	7.6	7.2	7.6	7.4	7.3	7.1	7.0	10
Alaska	7.6	6.4 7 7	6.4 7.1	6.6 7 7	6.I 7.0	6./ 7 7	6.9 7 1	6.9	6.5	6.5	28
Arizona	7.7	7.7	7.1	7.7	7.9	/./ 6.0	/.I	6.9 6.5	0.8	0./	21
Arkarisas	0.9 5 7	7.0	7.1	7.0	6.0	0.8	6.7	0.5 5.0	0.4 5 7	0.2 5 7	55
Colorado	J./ 75	7 1	5.9 7 1	5.9 7 /	7.6	7.6	7.5	5.9 7 /	5.7 7 0	5./ 7.0	11
Connecticut	67	7.1	68	6.8	7.0	7.0	7.5	6.9	67	6.6	23
Delaware	6.6	73	77	77	8.1	81	81	7.8	7.8	77	3
Florida	8.0	80	7.5	7.5	7.8	7.0	7.0	6.8	67	65	26
Georgia	6.8	7.4	7.5	73	7.5	7.5	7.0	73	7.2	71	8
Hawaii	5.7	6.5	6.5	5.8	6.2	6.4	6.3	6.1	5.9	5.9	42
Idaho	6.8	6.7	6.5	6.5	6.6	6.8	6.9	6.6	6.3	6.2	35
Illinois	6.4	6.8	6.9	7.0	7.2	7.0	7.0	6.7	6.5	6.4	30
Indiana	7.1	7.4	7.1	7.6	7.4	7.2	7.4	7.1	6.9	6.8	17
lowa	7.5	7.0	6.5	6.8	6.8	7.1	7.1	6.8	6.6	6.6	24
Kansas	7.0	7.0	7.0	7.0	7.1	7.2	7.3	7.2	7.0	6.6	25
Kentucky	6.8	6.9	6.7	6.9	6.7	6.7	6.6	6.5	6.2	6.1	40
Louisiana	8.3	7.5	7.6	7.7	7.2	7.6	7.5	7.3	7.1	7.2	7
Maine	5.4	6.0	5.6	5.7	5.8	5.8	5.8	5.7	5.6	5.7	48
Maryland	6.3	7.0	6.9	6.9	7.1	7.1	7.2	7.0	6.8	6.8	18
Massachusetts	5.9	7.0	6.5	6.9	7.2	7.1	7.1	6.9	6.6	6.5	27
Michigan	4.9	5.7	5.8	6.5	6.7	6.4	6.2	6.0	5.7	5.6	51
Minnesota	5.6	6.2	6.1	6.3	6.5	6.7	6.7	6.6	6.4	6.3	32
Mississippi	7.4	7.2	7.3	7.1	6.7	6.6	6.6	6.6	6.4	6.4	31
Missouri	7.0	7.4	7.4	7.4	7.3	7.2	7.1	7.0	6.8	6.7	20
Montana	6.7	5.6	5.6	5.6	6.1	6.7	6.6	6.5	6.1	6.0	41
Nebraska	7.2	7.2	7.1	7.3	7.2	7.2	7.3	7.2	7.0	7.0	12
Nevada	6.8	7.0	6.6	7.0	7.5	7.6	7.5	7.3	7.0	6.7	22
New Hampshire	7.2	8.0	/.3	1.1	/.8	1.1	7.6	7.4	7.2	7.1	9
New Jersey	5.8	6./	6.3	6.2	6./	6.3	6.2	6.1	5./	5./	46
New Mexico	0.8	0.4 5 1	0.4 5 1	0.4 5.4	6.Z	0.5 E 0	0.4 5 0	0.1 5 7	5.8 E E	5./ 5.F	45
New TOTK	4.7	5.1 7.4	73	5.4 7 2	J.9 7 5	J.0 7 5	J.0 7 5	3./ 7.2	5.5 7.0	5.5	16
North Dakota	7.0	6.2	6.0	6.8	6.8	7.5	7.5	7.2	6.0	6.9	1/
Ohio	61	6.1	5.9	6.0	63	62	60	5.9	5.7	5.5	52
Oklahoma	73	6.6	6.6	6.6	6.8	7 1	7.2	7.2	6.8	6.8	19
Oregon	5.4	5.9	5.8	6.6	6.3	7.0	6.9	6.8	6.4	6.2	34
Pennsylvania	5.6	6.3	6.5	6.6	6.8	6.6	6.6	6.4	6.2	6.1	37
Rhode Island	5.0	5.9	5.4	5.4	5.8	6.0	5.9	5.7	5.6	5.5	55
South Carolina	7.5	7.7	7.5	7.5	7.3	7.0	6.9	6.8	6.6	6.5	29
South Dakota	6.7	7.1	7.3	7.6	7.7	7.9	7.9	7.9	7.7	7.7	2
Tennessee	7.9	8.1	8.1	8.1	8.1	8.0	7.9	7.8	7.6	7.7	1
Texas	8.5	7.9	7.6	7.7	7.8	7.9	8.0	7.9	7.6	7.5	5
Utah	6.8	7.0	7.0	7.3	7.3	7.4	7.5	7.3	7.0	6.9	15
Vermont	5.3	6.0	6.0	6.2	6.2	5.9	5.7	5.6	5.3	5.3	57
Virginia	7.2	7.7	7.5	7.5	7.8	7.8	7.8	7.7	7.5	7.4	6
Washington	6.3	6.2	6.1	6.0	6.4	6.6	6.6	6.5	6.3	6.1	36
West Virginia	5.3	4.9	5.3	5.6	5.1	6.3	6.2	6.1	5.9	5.7	49
Wisconsin	5.8	5.6	6.0	6.3	6.4	6.5	6.5	6.2	5.9	5.9	43
Wyoming	8.2	6.2	7.2	7.5	7.0	7.3	7.2	7.3	7.0	7.0	13

# Table 2.4: Overall Scores at State/Provincial and Local/Municipal Levels, 1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank
Alberta	9.1	7.5	7.5	8.5	8.5	9.2	9.2	9.3	9.0	9.0	1
British Columbia	7.9	7.0	6.8	7.2	7.2	7.8	7.8	7.6	7.3	7.3	8
Manitoba	7.4	6.3	5.8	6.4	6.6	6.7	6.8	6.7	6.6	6.6	27
New Brunswick	3.3	5.3	4.5	5.5	5.8	5.9	5.9	5.6	5.4	5.4	48
Newfoundland	4.7	4.1	3.2	3.7	5.1	6.7	7.4	7.6	7.0	7.0	18
Nova Scotia	2.8	4.8	4.5	4.8	5.6	5.5	5.4	5.4	5.1	5.1	51
Ontario	8.2	8.1	7.2	7.6	8.0	7.8	7.7	7.5	7.3	7.3	12
Prince Edward Island	4.2	3.6	3.3	4.6	4.3	4.8	4.6	4.5	4.3	4.3	58
Quebec	6.5	6.6	6.1	6.4	6.8	6.6	6.5	6.4	6.2	6.2	33
Saskatchewan	7.6	5.3	5.4	7.0	6.6	7.2	7.5	8.2	7.9	7.9	3
Alabama	6.7	6.8	6.6	6.6	5.9	5.9	5.7	5.6	4.8	4.8	54
Alaska	9.3	8.1	7.4	7.4	5.7	6.5	6.7	7.0	5.2	5.9	39
Arizona	7.4	7.6	7.0	7.7	7.6	7.6	7.6	7.1	6.3	6.2	34
Arkansas	6.6	6.7	6.8	6.9	6.3	6.4	6.3	6.1	5.5	5.2	49
California	7.5	7.8	7.8	7.7	7.9	7.9	7.9	7.6	7.0	7.2	13
Colorado	8.0	7.9	7.5	8.1	8.4	8.2	8.3	8.1	7.5	7.3	10
Connecticut	/./	8.3 0.6	8.0	8.2	8.3	8.3	8.3	7.9	/.0	/.1	1/
Elorida	0.3 6 9	0.0 7 2	0.0 6.0	0./ 7.0	9.0	0.0 7 0	0.0 7 0	0.0 7.0	0.5 6 2	0.Z	26
Georgia	0.8 7.6	7.5 8.1	8.0	7.0 8.1	7.5 8.2	7.2	7.2	7.0	7.0	6.7	26
Hawaii	7.0	7.8	8.0	7 1	6.8	7.0	7.7	6.8	5.1	5.6	47
Idaho	7.2	6.9	6.9	7.3	6.9	7.1	7.0	6.9	5.7	5.8	41
Illinois	7.8	8.3	8.2	8.3	8.2	8.1	8.0	7.7	7.2	7.3	11
Indiana	7.7	7.9	7.8	8.0	7.9	7.5	7.5	7.2	6.6	6.8	23
lowa	7.3	7.1	7.3	7.5	7.3	7.4	7.6	7.3	6.6	6.8	20
Kansas	7.5	7.4	7.4	7.6	7.5	7.3	7.4	7.2	6.1	6.6	28
Kentucky	7.2	7.0	7.0	7.2	6.6	6.1	6.3	5.2	4.9	4.6	56
Louisiana	8.5	8.0	7.7	7.4	6.9	5.6	6.9	6.7	6.2	6.2	32
Maine	6.5	6.9	6.2	6.2	6.3	6.0	5.9	5.8	5.0	5.0	52
Maryland	6.3	7.0	6.7	6.8	6.9	6.3	6.7	6.4	5.8	5.7	45
Massachusetts	7.2	7.8	7.2	7.8	8.0	7.7	7.6	7.2	6.7	6.7	25
Michigan	7.4	7.8	7.3	7.7	7.6	7.0	6.9	6.3	5.7	5.7	46
Minnesota	/./	7.9	/./	8.1	8.0	8.1	7.8	7.8	7.2	/.3	9
Mississippi	5.8	0.1 7 1	5.9	6.0 7.2	5.2	2.5	4.6	4.9	4.1	4.3	5/
Missouri	0.0 6 9	7.1 5 7	7.1	7.Z	7.Z	0.8 5.0	0./ 6.1	0.5 5.0	5.9	5./ 1 0	44
Nohracka	0.8 7 5	5.7 7.4	3.3 7 7	2.5 8.1	5.2 7.6	5.9 7.6	7.8	J.9 7 5	4.9	4.0 7.4	55
Nevada	7.5	7.4	7.7	8.4	86	87	87	84	7.5	7.4	4
New Hampshire	7.4	8.3	8.0	8.2	8.3	7.9	7.8	7.6	7.1	7.1	16
New Jersev	7.9	8.3	8.1	8.0	8.2	8.0	7.9	7.7	7.3	7.1	14
New Mexico	6.7	5.9	5.9	6.3	5.4	5.6	5.4	5.2	4.3	4.3	59
New York	7.5	7.8	7.4	7.3	7.4	7.5	7.5	7.3	6.9	6.9	19
North Carolina	7.9	8.3	7.9	7.9	7.9	7.8	7.7	7.5	6.9	6.7	24
North Dakota	7.1	5.7	5.8	6.9	5.4	6.5	6.7	6.8	6.0	6.4	30
Ohio	7.3	7.5	7.2	7.5	7.4	6.9	6.5	6.7	5.9	5.9	40
Oklahoma	7.9	7.3	6.8	6.8	6.4	6.8	6.8	6.9	5.9	6.0	38
Oregon	6.8	7.2	7.1	7.4	7.1	7.6	7.5	7.4	6.5	6.4	29
Pennsylvania	6.6	7.1	7.2	7.0	7.0	6.8	6.7	6.5	6.0	5.8	43
Rhode Island	6.4	7.1	6.5	6.4	6.7	6.8	6.7	6.4	5.8	5.8	42
South Carolina	6.9	7.4	6.9	7.0	6.8	6.3	6.2	5.9	5.1	5.2	50
	0./ 7 0	0./	0.9	7.4	7.0	0.8	7.0	1.2	0./ 5.0	0.8 6.0	22
Tevas	7.2 8.7	7.5 8.4	7.4 8.7	2.7 8.2	7.4 8.2	2.1	7.1 8.4	0.0 8 0	5.9 7.5	7.5	57
lltah	74	73	74	8.0	79	8.0	8.0	8.0	7.5	7.5	15
Vermont	6.7	7.4	7.2	7.1	6.8	6.4	6.2	5.8	5.1	5.0	53
Virginia	6.5	7.2	7.0	7.1	7.1	6.9	6.8	6.6	5.6	6.2	35
Washington	7.2	7.5	7.6	7.5	7.7	7.8	7.8	7.7	7.0	6.8	21
West Virginia	5.8	5.8	5.4	5.2	4.5	5.1	4.9	4.8	4.4	4.3	60
Wisconsin	7.3	7.6	7.5	7.8	7.6	7.5	7.4	7.2	5.9	6.3	31
Wyoming	8.7	7.8	7.8	7.6	7.0	7.5	7.7	7.8	7.3	7.4	7

# Table 2.5: Scores for Size of Government at the Federal, State/Provincial, and Local/Municipal Levels,1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank*
Alberta	7.6	5.3	6.1	7.6	7.3	8.6	8.6	8.7	8.5	8.5	1
British Columbia	6.4	5.8	5.8	5.5	6.0	7.3	7.2	7.0	7.0	7.0	9
Manitoba	7.2	6.3	5.5	5.9	6.5	6.9	6.9	6.9	7.1	7.1	8
New Brunswick	5.4	5.6	4.9	5.6	6.1	6.4	6.2	5.9	6.3	6.3	31
Newfoundland & Labrador	4.6	4.6	3.8	3.2	5.7	6.7	7.5	7.9	7.0	7.0	12
Nova Scotia	4.7	6.0	5.5	5.8	6.6	6.2	6.0	5.9	6.1	6.1	34
Ontario	7.4	7.3	5.8	5.8	7.1	7.2	7.0	6.6	6.8	6.8	17
Prince Edward Island	5.0	5.3	4.7	5.3	5.5	6.3	5.8	5.9	6.4	6.4	29
Ouebec	5.6	5.1	4.8	4.5	5.8	5.8	5.5	5.4	5.6	5.6	42
Saskatchewan	5.9	4.8	4.6	6.1	6.2	7.3	7.4	8.1	7.8	7.8	3
Alabama	7.9	8.0	/./	7.4	6.1	7.1	6.8	6./	6.2	5.9	39
Alaska	8.9	6./	5.9	5.2	4.1	5.2	5.6	5./	4./	4.8	54
Arizona	8.6	8.6	7.6	8.0	8.0	8.0	7.9	7.5	7.1	6./	22
Arkansas	8.2	8.3	8.1	7.8	7.3	/.3	7.2	7.0	6.6	5.9	38
California	6./	6./	6.1	5.9	6.6	6.5	6.5	6.2	5.6	5.4	44
Colorado	8.4	8.0	7.8	7.8	8.2	8.0	8.0	7.9	7.4	6./	19
Connecticut	7.8	8.5	/.3	7.4	/./	7.9	7.9	/./	7.3	6.9	14
Delaware	1.1	8.6	8.6	8.4	8.8	8.5	8.5	8.3	8.1	7.8	4
Florida	8.8	8.7	7.9	7.9	8.1	7.4	7.6	7.3	7.0	6.5	28
Georgia	8.4	8./	8.2	8.0	8.2	8.0	7.8	7.5	/.3	6.8	18
Hawaii	7.1	8.0	8.1	6.4	6./	7.4	7.3	7.0	6.6	6.3	30
Idaho	8.1	7.8	7.8	7.2	7.2	7.3	7.4	7.1	6.3	6.0	3/
Illinois	7.0	7.5	7.6	7.5	7.6	7.4	7.4	7.1	6.6	6.1	35
Indiana	8.2	8.5	8.2	8.3	8.2	7.8	/./	7.5	7.1	6.8	16
lowa	7.9	7.4	7.6	/./	7.4	7.6	7.4	7.1	6./	6.5	27
Kansas	8.2	8.3	8.0	7.9	7.8	7.8	7.9	1.1	7.2	6.8	15
Kentucky	7.6	8.1	7.6	7.5	7.1	6.4	6.3	6.1	5.5	5.0	53
Louisiana	8.9	7.8	7.9	7.6	6.8	/.3	7.1	6.5	6.2	6.2	32
Maine	6.7	6.8	5.8	6.0	6.2	6.0	6.0	5.9	5.5	5.3	46
Maryland	7.2	7.8	7.2	7.3	7.4	/.3	7.2	7.0	6.5	6.2	33
Massachusetts	6.6	7.6	6.5	7.3	/./	7.5	7.4	7.1	6.6	6.1	36
Michigan	5.4	6.1	5./	6.9	7.2	6.5	6.3	6.0	5.3	4./	59
Minnesota	7.2	7.1	6./	6.8	6.8	/.1	7.0	6.9	6.3	5.8	40
Mississippi	7.6	7.5	7.5	/.3	6.4	6.0	5.9	6.0	5.4	5.1	51
Missouri	8.2	8.8	8.4	8.3	7.8	7.6	7.5	/.3	6.8	6.5	26
Montana	7.7	6.1	5.9	5.5	6.1	6.5	6.6	6.4	5.8	5.2	50
Nebraska	9.0	8.5	8.6	8.6	8.4	8.2	8.2	8.1	7.9	1.1	5
Nevada	8.1	8.0	7.3	8.3	8.6	8./	8.6	8.3	7.5	6./	21
New Hampshire	8.4	9.2	8.2	8.3	8.5	8.2	8.1	7.9	7.5	7.0	10
New Jersey	6.8	7.8	7.6	6.9	7.5	6.9	6.8	6.8	6.1	5.3	4/
New Mexico	8.5	7.6	7.3	6.9 5 0	6.1	6.3	6.1	5.9	5.4	4.8	55
New York	6.I	6.3	5.6	5.2	6.0 7 7	6.1	6.2	6.0 7 7	5.5	5.2	49
North Carolina North Dakata	8.1 0.C	8.0	8.0	7.8	7.7	8.0	8.0	7.7	7.2	0./	20
	8.6	/.1	7.0	7.4	/.1	7.6	7.6	7.4 5.2	7.0	7.0	11
UIII0 Oklahama	0.5	0./	0.0	0.3	0.2	5.0 7.5	5./ 7.4	5.5	4.7	4.Z	00
Okidriorita	8.8 6.5	7.8	7.5	7.4	7.3	7.5	7.4	7.5	0.8	0.5	24 52
Deppsylvania	0.5 E 0	7.0	0.0	0.4	5.9	0.0	0.7	6.0	5./ E 0	5.0	5Z 40
Perilisyivalia Dhada Island	5.9	0.7	0.0	0.7	0.9	0.5	0.0	0.5	5.0	5.Z	40
Kiloue Isidilu	5.0 7.0	0.7	5.5 7 7	5.5 7.2	5.0 7.0	0.1	5.9	5.0 E.C	5.Z E 1	4.7	50
South Dakata	7.9	0.5	7.7	7.5	7.0	0.1	0.1	0.0	0.1	4.0	20
Julii Dakula	7.9 0 1	0.4 0 7	0.D	0.D	0.4 0 A	0.4 76	0.3 7 E	0.4 7 /	0.1	1.9	۲ ۲۵
Toyac	0.4	0./ 0.0	0.4 0 <i>c</i>	0.2 0 0	0.U 0 1	7.0 0.1	7.5 0 F	7.4 0 /	0.9	0.9	15
icras Litab	9.7	0.0	0.0 7 7	0.2	0.Z 7 E	0.4 7 4	0.0 7 7	0.4	7.9	1.5	0 75
Vormont	0.U	ö.l	1.1	0.U	1.5	7.0 <i>C</i> /	1.1	/.J	7.0	C.O	25 57
Verifioni	0.4	7.0	0.4	0./	0.0	0.4	0.1	5.8 7.0	5.Z	4./	رد ح
Virgillid Washington	ŏ.ک ح ح	٥.ठ ح ح	ŏ.ک	7.9 6 F	0.3 67	ö.l	0.U 7 2	7.9	1.1	7.4	/
Washington Wast Virginia	1.2	/.Z	0.8	0.5	0./	7.4	1.3	/.I	0.5	Σ.ŏ	41 45
west virginia Wissensin	0.0	5.8 C 2	5./	5.5	4./	0.8	0.3	0.3	5.9	5.4 5.7	45
WISCONSIN When the test	/.3	6.3 7 1	0.8	/.1	b./	0.8	b./	6.4 77	5.5	5.5	43 22
vvyoming	9.5	7.1	7.4	1.3	7.0	7.5	7.5	1./	6.9	6.6	23

# Table 2.6: Scores for Size of Government at the State/Provincial, and Local/Municipal Levels, 1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank*
Alberta	6.2	6.5	5.7	6.0	7.0	7.1	7.2	7.6	7.1	7.1	9
British Columbia	4.5	4.4	4.0	3.2	4.4	4.8	4.9	5.3	5.1	5.1	53
Manitoba	4.8	4.2	3.8	3.9	4.3	4.6	4.9	5.1	5.0	5.0	55
New Brunswick	3.2	3.9	3.2	3.4	4.3	4.4	4.5	4.6	4.6	4.9	56
Newfoundland & Labrador	4.5	4.0	3.0	2.7	4.1	6.2	6.8	6.9	6.1	6.1	36
Nova Scotia	3.9	4.1	3.6	3.5	4.1	3.8	4.0	4.3	4.2	4.0	58
Ontario	4.3	4.1	3.7	3.5	4.1	4.3	4.5	4.6	4.7	4.7	57
Prince Edward Island	5.0	4.7	3.7	3.2	3.3	3.4	3.6	4.0	4.0	4.0	59
Quebec	3.8	3.4	2.8	3.0	3.2	3.2	3.5	3.6	3.6	3.6	60
Saskatchewan	4.7	5.0	4.0	4.1	4.5	5.2	5.8	6.6	6.0	6.0	39
Alabama	5.2	5.8	7.1	6.4	6.3	6.5	6.4	6.3	6.6	6.7	17
Alaska	6.8	7.5	8.2	8.1	7.5	8.1	8.2	8.2	8.0	8.2	1
Arizona	4.8	5.0	6.1	5.8	6.3	6.1	5.9	5.9	6.0	6.2	30
Arkansas	5.3	5.4	6.9	5.9	5.9	5.4	5.5	5.6	5.7	5.7	49
California	4.9	5.1	6.2	5.5	5.6	5.5	5.5	5.6	5.8	5.8	46
Colorado	5.2	5.5	6.6	6.4	6.5	6.5	6.4	6.4	6.7	6.8	15
Connecticut	4.4	5.6	7.1	5.7	5.8	6.0	5.9	5.9	6.3	6.4	26
Delaware	5.7	6.1	8.0	7.3	7.7	7.4	7.7	6.7	7.4	7.3	3
Florida	4.3	5.1	6.3	5.4	5.8	5.5	5.4	5.4	5.8	5.9	42
Georgia	5.3	5.8	7.0	6.3	6.5	6.4	6.6	6.9	7.1	7.1	8
Hawaii	4.8	5.3	6.4	5.6	5.8	5.8	5.6	5.1	5.5	5.7	48
Idaho	5.3	5.2	6.2	5.9	5.9	6.0	6.0	6.1	6.4	6.7	20
Illinois	4.7	5.6	7.0	6.2	6.3	6.4	6.4	6.5	6.7	6.8	11
Indiana	5.1	5.7	7.0	6.6	6.6	6.6	6.8	6.6	6.5	6.6	21
lowa	5.1	5.3	6.6	6.2	6.5	6.8	6.9	6.6	6.7	6.8	13
Kansas	5.1	5.3	6.6	5.9	6.0	6.2	6.1	6.2	6.3	6.5	22
Kentucky	5.4	5.8	6.9	6.3	6.1	6.2	6.1	5.9	6.0	6.1	37
Louisiana	6.2	6.4	7.3	6.9	6.5	7.7	7.0	7.0	7.0	7.2	5
Maine	4.7	4.8	6.2	5.1	5.2	5.2	5.4	5.1	5.3	5.7	47
Maryland	4.6	5.2	6.6	5.9	6.0	5.8	5.8	5.9	6.2	6.2	29
Massachusetts	4.9	5.6	7.0	5.9	6.2	6.2	6.1	5.9	6.I	6.1	35
Michigan	4.0	5.1	0.0 6.2	5.9	6.2	0.1 E 0	5.9	5.9	6.0	6.2	28
Miniesold	5.0	5.5	0.5	5.5	6.0 E 7	5.9	5.7	5.7	6.0 E 7	6.0 E 0	20 41
Mississippi	5.0	5.0	0.0	6.5	5.7	5.0	5.7	5.5	5.7	5.9	25
Montana	5.7	5.0	6.5	5.7	5.8	6.0	6.0	5.9	6.1	6.2	32
Nehraska	53	5.6	6.8	63	6.2	6.4	6.4	6.1	6.5	6.5	23
Nevada	4.6	5.4	6.8	5.9	6.2	6.3	6.5	6.8	7.1	7.2	6
New Hampshire	4.8	5.9	7.3	6.7	6.5	6.6	6.6	6.0	6.4	6.5	24
New Jersev	4.1	5.0	6.4	5.4	5.4	5.4	4.9	4.7	5.0	5.1	54
New Mexico	5.4	5.2	6.3	5.9	6.0	6.0	5.7	5.0	5.4	5.6	50
New York	4.5	4.7	6.2	5.5	5.6	5.8	5.5	5.6	5.8	5.9	43
North Carolina	5.5	5.7	7.2	6.4	6.8	6.4	6.2	6.3	6.6	6.8	14
North Dakota	5.5	5.3	5.8	6.2	6.2	6.2	6.2	6.2	6.1	6.2	27
Ohio	4.8	5.2	6.5	5.8	6.1	6.4	6.0	5.8	5.9	6.0	40
Oklahoma	5.5	5.6	6.6	6.0	6.0	6.4	6.8	7.0	7.1	7.2	4
Oregon	4.9	5.0	6.2	6.5	6.6	6.8	6.9	6.4	6.7	6.8	16
Pennsylvania	4.4	5.2	6.7	5.9	6.3	6.1	5.9	5.8	6.0	6.2	33
Rhode Island	4.1	4.5	5.9	5.0	5.1	5.3	4.8	4.9	5.0	5.2	52
South Carolina	5.0	5.3	6.8	6.1	6.2	3.5	5.7	5.8	6.1	6.2	31
South Dakota	5.0	5.9	7.2	6.8	6.9	6.7	6.7	7.0	6.9	7.2	7
Tennessee	5.1	5.9	7.3	6.5	6.7	6.6	6.6	6.5	6.7	6.8	12
Texas	5.8	6.2	7.3	6.7	6.7	7.0	6.9	6.9	7.1	7.3	2
Utah	5.3	5.8	7.1	6.4	6.6	6.7	6.8	6.2	6.5	6.7	19
Vermont	4.7	4.6	6.4	5.3	5.3	5.2	4.9	5.2	5.4	5.5	51
Virginia	5.0	5.7	7.0	6.3	6.6	6.5	6.5	6.4	6.7	6.7	18
washington	4.3	5.1	6.2	5.4	5.7	5.7	5.9	5.4	6.1	6.2	34
west Virginia	4.2	4.4	5.9	5.6	5.1	5.5	5.5	5.5	5.7	5.9	44
Wisconsin	4.5	4.7	6.3	5.6	5.8	6.0	5.9	5.4	5.7	5.8	45
Wyoming	6.0	5.8	7.7	7.0	6.1	6.7	6.2	6.4	6.8	7.0	10

# Table 2.7: Scores for Takings and Discriminatory Taxation at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank*
Alberta	8.7	8.0	7.1	7.5	8.3	8.9	8.6	8.8	8.4	8.4	2
British Columbia	5.4	4.9	5.2	4.5	5.6	6.2	6.2	6.4	6.2	6.2	37
Manitoba	5.7	4.6	4.3	4.7	5.0	5.5	5.6	5.7	5.7	5.7	49
New Brunswick	5.3	4.6	4.2	4.6	5.5	5.5	5.5	5.4	5.5	5.7	48
Newfoundland & Labrador	4.9	4.1	3.7	3.6	5.1	7.0	7.3	7.7	6.8	6.8	19
Nova Scotia	5.7	5.0	4.7	4.8	5.1	5.2	5.3	5.3	5.0	4.9	59
Ontario	5.9	5.1	4.5	4.4	5.1	5.4	5.4	5.4	5.5	5.5	50
Prince Edward Island	5.7	5.5	5.0	4.7	4.5	4.8	4.9	5.1	5.0	5.0	56
Quebec	4.5	3.5	3.2	3.7	3.6	4.0	4.0	4.2	3.9	4.1	60
Saskatchewan	6.3	5.4	4.1	4.4	4.9	5.8	6.3	7.0	6.5	6.5	32
Alabama	7.7	7.6	7.5	7.4	7.2	7.3	7.2	7.1	7.1	7.2	12
Alaska	8.7	7.1	7.5	8.7	8.3	8.6	8.7	8.8	8.7	8.7	1
Arizona	6.8	6.3	5.4	6.5	6.9	6.5	6.3	6.2	6.4	6.5	31
Arkansas	7.2	6.7	7.0	6.4	6.3	5.8	5.8	5.8	5.8	5.9	45
California	5.6	5.6	5.5	5.5	5.7	5.5	5.6	5.3	5.3	5.3	52
Colorado	7.7	6.7	6.4	6.8	7.1	7.0	7.0	7.0	7.0	7.1	16
Connecticut	7.2	7.4	6.7	6.1	6.4	6.5	6.5	6.3	6.3	6.4	33
Delaware	6.4	6.9	7.9	7.7	8.4	8.4	8.5	8.1	8.1	8.1	3
Florida	7.4	7.0	6.3	6.3	6.8	6.2	5.9	5.9	5.9	6.0	40
Georgia	6.9	7.2	6.7	6.8	7.0	6.8	6.7	6.7	6.8	6.8	20
Hawaii	5.2	5.8	5.7	4.9	5.6	5.4	5.2	5.0	5.0	5.1	55
Idaho	6.6	6.0	5.7	5.6	5.8	5.8	5.9	5.8	5.9	6.0	42
Illinois	6.7	7.0	6.7	6.7	6.9	6.6	6.6	6.5	6.5	6.6	29
Indiana	7.6	7.2	7.1	7.5	7.4	6.9	7.3	6.9	6.8	6.9	18
lowa	7.5	6.1	6.2	6.4	6.7	6.9	7.0	6.8	6.7	6.8	23
Kansas	6.5	6.0	6.5	6.0	6.4	6.1	6.2	6.2	6.2	6.2	36
Kentucky	7.1	6.8	6.5	6.5	6.5	6.7	6.6	6.6	6.6	6.6	27
Louisiana	8.9	7.2	6.9	7.6	6.9	7.3	7.0	7.0	7.0	7.2	11
Maine	5.6	5.5	5.3	4.7	4.7	4.7	4.8	4.7	4.8	5.3	51
Maryland	6.6	6.7	6.7	6.5	6.7	6.7	6.9	6.7	6.7	6.7	24
Massachusetts	6.4	7.0	6.7	6.6	7.0	6.6	6.8	6.7	6.7	6.7	26
Michigan	5.3	6.1	6.0	6.5	6.8	6.2	6.2	6.0	5.9	5.9	44
Minnesota	4.9	5.9	5.7	5.6	6.1	6.2	6.1	6.1	6.1	6.1	39
Mississippi	7.0	6.2	6.4	6.0	5.7	5.7	5.8	5.8	5.8	5.9	46
Missouri	7.9	7.5	7.4	7.2	7.3	7.0	7.0	7.0	7.0	7.1	15
Montana	6.9	5.4	5.6	5.6	6.1	6.7	6.7	6.7	6.7	6.7	25
Nebraska	6.5	6.3	6.5	6.4	6.4	6.3	6.4	6.3	6.4	6.5	30
Nevada	6.9	6.5	6.4	6.3	6.9	6.9	6.9	6.7	6.8	6.8	21
New Hampshire	8.0	8.1	7.2	7.7	7.8	7.5	7.3	7.3	7.3	7.3	9
New Jersey	6.1	6.4	5.6	5.4	6.1	5.5	5.3	4.9	4.7	5.2	53
New Mexico	6.8	5.9	5.7	6.0	6.0	6.4	6.3	6.0	6.0	6.1	38
New York	4.1	3.9	4.6	5.1	5.7	5.2	5.2	5.1	5.1	5.2	54
North Carolina	7.2	7.1	7.0	6.9	7.3	6.9	6.9	6.8	6.8	6.8	22
North Dakota	8.1	5.6	4.8	6.5	6.5	7.0	7.1	7.1	7.0	7.0	17
Ohio	6.6	5.7	5.8	5.5	6.0	5.8	5.8	5.9	6.0	6.0	41
Oklahoma	7.5	6.2	6.3	6.2	6.4	6.7	6.9	7.1	7.0	7.1	14
Oregon	5.3	5.4	5.3	7.1	6.9	7.6	7.5	7.5	7.5	7.5	6
Pennsylvania	6.6	6.7	6.6	6.6	7.0	6.4	6.4	6.3	6.3	6.4	34
Rhode Island	4.5	5.1	5.1	4.4	5.1	5.0	5.0	4.9	4.9	4.9	57
South Carolina	6.7	6.5	6.5	6.6	6.5	6.3	6.1	6.3	6.3	6.3	35
South Dakota	7.2	7.0	7.4	7.4	7.7	7.7	7.8	7.9	7.9	7.9	4
Tennessee	7.8	7.7	7.8	7.7	7.8	7.6	7.4	7.4	7.4	7.5	7
Texas	8.6	7.5	7.2	7.4	7.5	7.6	7.6	7.7	7.6	7.8	5
Utah	7.6	6.9	7.1	7.0	7.2	7.0	7.3	7.0	7.1	7.2	13
Vermont	4.7	5.1	5.6	5.2	5.5	4.7	4.4	4.6	4.6	4.9	58
Virginia	7.2	7.3	7.1	7.2	7.4	7.2	7.1	7.2	7.2	7.2	10
Washington	6.8	6.0	5.9	5.6	6.4	6.4	6.4	6.4	6.5	6.6	28
West Virginia	4.8	4.5	5.1	5.4	4.8	5.6	5.9	5.9	5.9	5.9	43
Wisconsin	5.7	5.1	5.5	5.5	6.1	6.2	6.2	5.7	5.7	5.7	47
Wyoming	8.4	4.9	7.6	8.0	7.2	7.2	7.0	7.0	6.9	7.3	8

# Table 2.8: Scores for Takings and Discriminatory Taxation at the State/Provincial, and Local/Municipal Levels, 1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank*
Alberta	5.2	5.1	5.3	6.3	6.8	7.2	7.2	7.1	6.6	6.7	40
British Columbia	3.4	4.1	4.3	4.2	4.6	5.6	5.7	5.7	5.5	5.5	52
Manitoba	3.0	3.1	3.3	4.0	4.2	4.3	4.5	4.3	4.0	4.0	58
New Brunswick	1.8	3.3	3.6	4.3	4.9	5.3	5.3	5.0	4.8	4.7	55
Newfoundland	0.9	1.7	2.5	3.0	3.9	5.0	5.1	4.8	3.9	4.0	59
Nova Scotia	1.8	3.1	3.7	4.2	4.7	4.9	4.9	4.8	4.4	4.4	56
Ontario	4.5	5.0	4.8	5.0	5.8	5.9	5.9	5.6	5.3	5.2	53
Prince Edward Island	2.4	3.2	3.3	4.2	4.4	4.7	4.7	4.4	4.0	4.0	60
Quebec	2.3	3.3	3.1	3.4	4.0	4.4	4.5	4.3	4.1	4.1	5/
Saskalchewan	3.0	3.3	3.0	4.4	4.5	4.8	5.0	5.1	4.0	4./	54
Alabama	4.1	5.5	5.9	6.7	6.9	7.5	7.4	7.1	6.6	6.6	44
Alaska	4.9	5.2	5.6	6.1	6.0	6.4	6.5	6.5	6.3	6.2	49
Arizona	5.3	6.6	6.6	7.5	7.7	8.0	7.6	7.4	7.3	7.4	13
Arkansas	4.9	6.0	6.2	7.2	7.2	7.7	7.5	7.4	7.2	7.1	27
California	5.1	6.3	6.4	7.0	6.9	7.4	7.2	6.9	6.8	6.9	3/
Connecticut	5./	6.5	6.8 7.0	7.6	7.8	8.3	7.9	7.8	/./	7./	3 15
Dolawaro	5.5 5.3	6.7	7.0	7.0	7.4	7.5	7.0 . 1	7.4	7.5	7.4 7.8	15
Florida	5.5	6.7	67	7.7	7.0	8.0	7.0	7.7	7.0	7.0	9
Georgia	4 9	6.6	6.9	7.4	7.8	8.2	82	8.0	7.5	7.0	8
Hawaii	4.1	5.2	5.6	6.0	6.2	6.3	6.4	6.2	6.1	6.2	50
Idaho	4.7	5.7	6.2	7.0	7.1	7.8	7.9	7.4	7.0	6.9	36
Illinois	5.0	6.1	6.4	7.0	7.2	7.4	7.5	7.1	6.9	7.1	29
Indiana	4.6	5.9	6.1	7.1	7.2	7.8	7.8	7.4	7.2	7.2	23
lowa	5.2	5.9	6.2	6.9	7.0	7.6	7.6	7.2	7.1	7.2	22
Kansas	5.4	6.3	6.3	6.9	7.1	7.7	7.8	7.6	7.3	7.2	21
Kentucky	4.8	5.9	6.2	6.9	7.0	7.5	7.5	7.3	6.9	6.9	35
Louisiana	5.9	6.3	6.7	7.0	7.1	8.1	8.1	7.9	7.5	7.6	7
Maine	3.9	5.6	5.7	6.7	7.0	7.0	7.0	6.8	6.7	6.8	38
Maryland	4.3	5.9	6.3	6.8	7.1	7.4	7.5	7.4	7.1	7.2	24
Massachusetts	5.0	6./	6.8	7.3	7.3	/./	1.1	7.3	7.2	7.4	12
Minneceta	4.2	5.5 6.1	5.7	0.5 6.0	0.8	7.0	0./	0.5	0.3	0.0	42
Mininesola	1.2	5.5	0.Z	6.7	6.6	7.7	7.7	7.5	7.5	7.5	10
Missouri	4.5	5.5 6.0	5.0	7.0	7.2	7.2	7.1	7.2	7 1	7 1	4J 28
Montana	4.8	5.1	5.2	6.0	6.4	7.2	6.9	6.8	6.2	6.4	48
Nebraska	5.3	6.2	6.3	7.3	7.5	7.9	8.0	7.7	7.4	7.3	17
Nevada	5.4	6.5	6.6	6.9	7.4	7.9	7.7	7.4	7.2	7.0	32
New Hampshire	5.4	7.0	7.0	7.6	7.8	8.1	8.0	7.6	7.4	7.5	10
New Jersey	4.6	6.1	6.3	6.7	7.2	7.2	7.2	7.2	7.0	7.2	20
New Mexico	4.8	5.5	5.8	6.6	6.7	7.1	7.2	6.8	6.4	6.5	46
New York	4.3	5.5	5.6	6.3	6.6	6.8	6.7	6.6	6.5	6.6	41
North Carolina	5.5	7.0	7.1	7.7	8.0	8.3	8.2	7.9	7.7	7.6	6
North Dakota	5.7	5.8	6.0	7.0	7.1	7.7	7.8	7.7	7.3	7.3	16
Ohio	4.7	5.8	6.1	6.8	7.0	7.5	7.1	7.0	6.8	7.0	34
Oklahoma	5.8	6.0	6.1	6./	7.0	7.6	7.6	7.4	7.0	7.0	33
Uregon Dennsulvania	4.4	5.6	5.5	6./	0.5 7 1	7.1	7.0	6.8 7.2	6.4 7 1	0.0 7 1	45
Phodo Island	4.5	5.0	6.1	6.7	6.0	7.0	7.5	7.2	6.0	7.1	25
South Carolina	4.7 4.0	6.5	6.7	7.4	7.4	7.4	7.5	7.1	0.9 7 1	7.1	20
South Dakota	49	6.0	63	7.4	7.5	8.0	8.0	7.5	7.1	7.0	5
Tennessee	4.6	6.1	6.5	7.3	7.6	8.1	8.1	7.8	7.5	7.5	11
Texas	6.5	6.9	7.1	7.6	7.8	8.3	8.3	8.1	7.8	7.7	4
Utah	4.4	5.6	6.0	7.0	7.4	8.1	8.0	7.7	7.3	7.2	19
Vermont	5.0	6.3	6.5	7.0	6.9	7.0	7.0	6.9	6.6	6.8	39
Virginia	4.9	6.5	6.7	7.4	7.8	8.3	8.3	8.1	7.8	7.7	2
Washington	4.3	5.3	5.8	6.4	6.4	6.6	6.7	6.6	6.3	6.4	47
West Virginia	3.6	4.6	5.1	5.9	6.2	6.7	6.6	6.2	6.0	6.0	51
Wisconsin	4.7	5.8	6.1	6.8	7.1	7.3	7.3	7.2	7.0	7.0	30
Wyoming	6.6	6.1	6.2	6.9	7.1	7.8	7.9	7.8	7.5	7.4	14

# Table 2.9: Scores for Labor Market Freedom at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2010, and Rank out of 60 for 2010

	1981	1986	1991	1996	2001	2006	2007	2008	2009	2010	Rank*
Alberta	4.7	4.5	4.7	5.6	6.1	6.4	6.4	6.3	5.9	5.9	50
British Columbia	3.1	3.8	4.0	3.9	4.2	5.1	5.1	5.1	4.9	5.0	52
Manitoba	3.2	3.2	3.2	3.6	3.9	4.0	4.1	4.0	3.8	3.8	58
New Brunswick	2.3	3.5	3.6	4.2	4.5	4.9	4.9	4.6	4.5	4.5	54
Newfoundland	1.4	2.0	2.6	2.9	3.4	4.4	4.4	4.1	3.4	3.4	60
Nova Scotia	2.4	3.4	3.8	4.2	4.5	4.7	4.7	4.5	4.2	4.2	56
Ontario	4.4	4.8	4.5	4.8	5.5	5.4	5.4	5.2	5.0	4.9	53
Prince Edward Island	2.7	3.6	3.6	4.4	4.7	5.0	5.0	4.7	4.3	4.3	55
Quebec	2.2	3.0	2.8	3.1	3.5	3.8	4.0	3.8	3.6	3.7	59
Saskatchewan	2.6	3.0	3.2	3.9	3.8	4.0	4.2	4.3	3.8	3.9	57
Alabama	7.2	7.6	7.7	8.1	8.3	8.3	8.3	8.2	8.0	8.0	5
Alaska	5.3	5.3	5./	6.0	5.9	6.2	6.3	6.2	6.1	6.0	4/
Arizona	7.6	8.1	8.2	8.5	8.7	8.6	7.1	7.0	6.9	7.0	14
Arkansas	5.4	5.9	6.2	6.8	6./	7.2	7.0	6.8	6.9	6.9	21
California	5.0	6.0	6.1	6.5	6.4	6.8	6.6	6.3	6.3	6.3	41
Colorado	6.5	6.5	7.0	7.5	7.3	1.1	7.4	/.3	1.2	7.2	9
Connecticut	5.1	6.4	6.5 C F	6.9 7 1	6.8 7 0	6.9 7 F	6.9	6./ 7 1	0.0	6./ 7 1	20
Delaware	5./	6.3	6.5	7.1	7.2	7.5	7.4	7.1	7.1	7.1	13
Florida	7.8	8.3	8.2	8.5	8.6	7.5	7.4	7.3	7.1	7.1	12
Georgia	5.0	6.4	6.6	7.2	7.4	/./	7.8	/./	7.5	/./	/
Hawali Idaha	4./	5.5 6 3	5.8	0.1	0.1 6 7	0.3	0.4 7.2	6.2	0.2 6.6	0.3 6 F	42
IUdiio	5.0	6.Z	5.9	0.0 6 7	0./	7.Z	7.3	6.9	0.0 6 2	0.5 6 F	30
IIIIII0IS	5.5 E 4	5.7	6.0	6.0	7.1 6.7	0.0	0.9	0.0	0.5	0.5	20
Inuidiid	5.4 7 1	0.5	0.0 5 7	6.2	6.7	7.1 6.0	7.1 6.0	0.0	0.0 6 5	0.0 6 5	29
IUWa Kansas	62	7.4 6.8	5.7	7.0	7.2	0.9	0.9	7.6	7.5	6.6	24
Kantucky	0.Z 5.Q	0.0 6.0	6.1	7.0	6.6	7.0	7.7	7.0 6.8	65	6.5	20
Louisiana	J.0 7 1	0.0 7.6	7.9	7.9	8.0	7.0 8.3	7.0 8.4	0.0 8 3	0.J 8 1	0.J 8 3	2
Maina	7.1 4.1	5.5	5.6	63	6.6	6.6	6.6	6.5	6.4	6.5	37
Maryland	5.0	63	6.7	7.0	7.2	7.5	7.5	7.4	73	74	8
Massachusetts	4.8	6.3	6.4	6.8	6.8	7.1	7.1	6.8	6.6	6.9	20
Michigan	3.9	5.0	5.6	6.2	6.1	6.4	6.1	6.0	5.8	6.1	45
Minnesota	4.9	5.6	5.8	6.4	6.7	7.0	7.0	7.0	7.0	7.0	16
Mississippi	7.5	7.8	7.9	8.2	8.1	8.2	8.1	8.1	8.0	8.1	4
Missouri	4.8	5.9	6.3	6.6	6.7	7.2	6.9	6.8	6.7	6.7	27
Montana	5.6	5.1	5.1	5.8	6.1	6.8	6.5	6.4	5.9	6.1	44
Nebraska	6.2	6.8	6.0	6.7	6.9	7.3	7.3	7.0	6.8	6.7	25
Nevada	5.5	6.4	6.2	6.4	6.9	7.3	7.1	6.8	6.7	6.5	32
New Hampshire	5.2	6.6	6.5	7.1	7.2	7.4	7.4	7.0	6.8	7.0	19
New Jersey	4.3	5.7	5.8	6.2	6.6	6.5	6.5	6.6	6.4	6.6	31
New Mexico	5.1	5.6	6.1	6.4	6.6	6.7	6.8	6.4	6.1	6.3	43
New York	4.0	5.0	5.1	5.8	5.9	6.1	6.0	6.0	5.8	6.0	48
North Carolina	5.7	6.6	7.0	7.2	7.4	7.7	7.5	7.3	7.1	7.0	15
North Dakota	5.7	5.8	6.0	6.6	6.8	7.2	7.3	7.2	6.8	6.8	22
Ohio	5.2	6.0	5.7	6.3	6.7	7.1	6.6	6.5	6.3	6.5	38
Oklahoma	5.8	5.9	6.0	6.4	6.7	7.2	7.1	6.9	6.6	6.6	30
Oregon	4.5	5.3	5.3	6.2	6.1	6.6	6.5	6.3	5.9	6.1	46
Pennsylvania	4.3	5.6	6.0	6.5	6.7	7.1	6.8	6.7	6.6	6.7	24
Rhode Island	4.9	5.8	5.8	6.4	6.5	7.0	6.9	6.7	6.6	6.7	23
South Carolina	8.0	8.3	8.3	8.5	8.4	8.6	8.6	8.4	8.4	8.4	2
South Dakota	4.9	5.9	6.1	6.8	7.1	7.5	7.5	7.5	7.2	7.2	10
Tennessee	7.5	7.8	8.1	8.4	8.5	8.7	8.8	8.7	8.6	8.6	1
lexas	7.3	7.5	7.0	7.4	7.6	7.7	7.7	7.5	7.2	7.2	11
Utah	4.8	5.9	6.1	6.8	7.1	7.7	7.6	7.4	7.0	7.0	18
Vermont	4.9	6.0	6.1	6.6	6.5	6.6	6.6	6.5	6.2	6.4	40
Virginia	6.0	7.2	7.1	7.4	7.7	8.1	8.1	7.9	7.7	7.7	6
Washington	4.9	5.5	5.5	6.0	6.0	6.2	6.2	6.1	5.9	6.0	49
West Virginia	4.3	4.4	5.0	5.7	5.9	6.4	6.3	6.0	5.8	5.7	51
Wisconsin	4.5	5.3	5.7	6.3	6.5	6.7	6.7	6.6	6.4	6.4	39
Wyoming	6.8	6.4	6.5	7.1	6.7	7.1	7.2	7.2	7.0	7.0	17

# Table 2.10: Scores for Labor Market Freedom at the State/Provincial, and Local/Municipal Levels,1981–2010, and Rank out of 60 for 2010

# Chapter 3 Economic Freedom of the Mexican States in 2010

by Nathan J. Ashby, Deborah Martinez, and Avilia Bueno<sup>1</sup>

In recent years, we have made a significant effort to create an index of economic freedom in the Mexican states comparable to that constructed for the US states and Canadian provinces. In 2008, we published a preliminary measure of economic freedom for Mexican states (Ashby, 2008). Needless to say this project has been rife with challenges, some of which have been resolved, while others continue to be worked out. This year's index includes measures of economic freedom for all 32 Mexican states between 2003 and 2010.

The most significant concern is how to measure the heterogeneity of property rights and legal structure within the three countries. It is essential that additional measures be used in order for Mexico to be comparable to the United States and Canada. At the very least, measures of property rights would need to be included as these vary considerably between Mexico, on one hand, and Canada and the United States, on the other. As discussed earlier in this publication, this has also become a problem in comparing the US states and the Canadian provinces. In earlier years, the data for Canada and the United States indicated that little separates the two nations on rule of law and some other areas that affect economic freedom. However, Canada and the United States have begun to diverge in some of these areas and to provide a more accurate comparison a "world-adjusted" index was introduced this year using world data from *Economic Freedom of the World* (Gwartney, Lawson, and Hall, 2011)

Mexico presents a different measurement problem as it has significant heterogeneity across states, which the use of national scores from the world index would obscure. Some reasonable measures are available at the state level for Mexico but there is an apparent trade-off between determining how to deal with heterogeneity

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within Mexico and the heterogeneity among the three countries. It is possible to include the national score for each subnational jurisdiction within a given country, in which case heterogeneity within Mexico would be ignored. Another option is to hold this measure constant for the US states and Canadian provinces while allowing the Mexican index to vary with the mean normalized around its national score. At issue here is how the distribution in Mexico relates to the scores in the United States and Canada. In other words, how do the states in the right tail of the distribution in Mexico relate to the scores in the United States and Canada? Although prior sentiment might be that the Mexican states should be lower, it remains unclear how to determine objectively what the distribution should be. Clearly, this issue needs much more thought.

A lesser problem is that the data for Mexico do not extend as far back as they do for the United States and Canada, at least at the state level. Much of the older data available is not trustworthy in that they demonstrate inconsistencies throughout the years.<sup>2</sup> In addition, some of the data that are available in Canada and the United States are difficult to obtain at the state level in Mexico.<sup>3</sup> Many of these problems have been overcome and we have been able to find data for nine of the ten measures currently included in the index of economic freedom in Canada and the United States. However, given the problems discussed above, it is premature to present an integrated index<sup>4</sup> and the analysis in this chapter will focus on an index specific to the Mexican states.

This chapter will describe an updated economic freedom index for the Mexican states from 2003 to 2010 using nine of the ten components currently used to calculate economic freedom in the United States and Canada. The new data improve upon the initial data calculated in 2008 by adding three variables that were previously not included, union density, government employment, and corruption. In addition, the calculations of many of the components that were included in the 2008 index have been improved using more complete data sources from the Mexican government. The 2012 measure also demonstrates a positive relationship with well-being that is demonstrated graphically. Perhaps the greatest contribution is that the index is now available for multiple years and can be used for analyzing the Mexican economy through time.

- [2] For instance, union-density rates and government-employment rates prior to 2005 are very volatile over time at the state level. Further investigation revealed that the sample used to estimate these rates were not representative of actual state populations. Beginning in 2005, the Encuesta Nacional de Ocupaciones y Empleo (National Survey of Occupations and Employment ) improved its survey methods substantially and the data have been consistent across states since that time.
- [3] The most notable are social-security expenditures.
- [4] It remains to be seen whether, when these problems are dealt with, integration of the indices can include data from past years or will only be feasible for data gathered in the future.

# Mexican State-Level Data

The preliminary index of economic freedom in Mexican states (EFM) (Ashby, 2008) was included in the 2008 report, *Economic Freedom of North America* (Karabegović and McMahon, 2008). This index ranked the Mexican states using seven of the ten components included in the measurement of economic freedom in the United States and Canada for 2003. We were unable to find reasonable data for social security expenditures at the state level, government employment, and union density. Distrito Federal (Federal District or Mexico City) was excluded.

The methodology of the current EFM was introduced in 2010 (Ashby, Martinez, and Bueno, 2010) and is displayed in figure 3.1. This report improves upon the original index in two important ways. First, two additional components are included: 3B: Government Employment as a Percentage of Total State/Provincial Employment and 3C: Union Density. The component for union density is constructed as union density is constructed in the index for economic freedom in North America (EFNA), by controlling for the size of the government and manufacturing sectors.<sup>5</sup> With the exception of social-security expenditures, the measure includes all the components currently included in the index for the United States and Canada. The second improvement is that we calculate the score for additional years from 2003 to 2010. Distrito Federal is included in the current construction. However, one should consider it to be similar to District of Columbia in that it does not have as many levels of government and is atypical of Mexican states. Researchers should use caution when conducting analyses that include Distrito Federal. Nevertheless, given its importance in terms of population size and GDP, it is necessary to include it.

As is the case for the United States and Canada, measures are not available for every year in which the EFM is estimated. Since reasonable data are not available for 3B and 3C prior to 2005 (footnote 2), the 2005 values are used for 2003 and 2004. The data for 4A: Impartiality of Judges and 4B: Institutional Quality of Judicial System are only available in 2003, 2006, and 2008. Component 4C: Trustworthiness and Agility of Public Property Registry is only available in 2003 and 2006. The component measuring Piracy of Software, which was included in the 2008 report, has been omitted due to significant discrepancies in the data through time. For instance, Distrito Federal had a value of 9.65 out of 100 in 2006 and a score of 93.6 on the same

<sup>[5]</sup> In constructing the EFNA index, the measure of union density takes into consideration the extent to which government employment or manufacturing drives unionization rates in the United States and Canada. To control for this, union density by state was regressed on the size of the manufacturing and government sectors. Manufacturing was found to be insignificant so it was dropped from the regression. The score for union density was calculated by taking the residuals from the latter regression to determine the actual level of union-friendly policies by state. When constructing the EFM index, we could not take it for granted that manufacturing would also be insignificant for Mexico. In fact, it turns out that it is very significant and, for this reason, we calculate the score by controlling for manufacturing and government employment in Mexico.

# Figure 3.1: Areas and Components Used in the Index of Economic Freedom of the Mexican States

# Area 1 Size of Government

Component 1A	General Consumption Expenditures by Government as a Percentage of GDP
Component 1B	Transfers and Subsidies as a Percentage of GDP

# Area 2 Takings and Discriminatory Taxation

- Component 2A Total Tax revenues at all levels of government as a percentage of GDP
- Component 2B Top Marginal Income Tax Rate and the Income Threshold at Which It Applies
- Component 2C Indirect Tax Revenue as a Percentage of GDP
- Component 2D Total Value-Added Taxes as a Percentage of GDP

## Area 3 Labor Market Freedom

Component 3A Minimum Wage LegislationComponent 3B Government Employment as a Percentage of Total State EmploymentComponent 3C Union Density

# Area 4 Legal System and Property Rights

Component 4A	Impartiality of Judges
Component 4B	Institutional Quality of Judicial System
Component 4C	Trustworthiness and Agility of Public Property Registry
Component 4D	Corruption

Notes: Area 4 and its components are included in the Mexican measurement of economic freedom but are not included in the index of economic freedom in the United States and Canada. Component 1C of the US and Canadian index is not included in the Mexican index.

scale in 2003; Chiapas had a score of 3.8 in 2003 and a score 22.7 in 2006. We use trending to calculate the values for 4A, 4B, and 4C between 2004 and 2005. We also use trending to calculate the values for 2007 for 4A and 4B while using the values in 2008 for 2009 and 2010. We hold the 2006 scores constant through 2010 for 4C because the measure has been unavailable in recent years. In addition, this year we added component 4D, Corruption. This measure is taken from the *Indice Nacional de Corrupcion y Buen Gobierno*, which measures the level of corruption at the three levels of government (Transparencia Mexicana, 2010). This measure is available for 2003, 2005, 2007, and 2010. We use trending to calculate the missing values.

The rankings for economic freedom in 2010 for the 32 Mexican states and federal entities are displayed in figure 3.2. Guanajuato ranked the highest, followed by Chihuahua and Baja California. The states with the least economic freedom were Tlaxcala, Chiapas, and Tamaulipas. The overall scores and rankings between 2003



# Figure 3.2: Summary of Economic Freedom Ratings for Mexico, 2010

Note: For simplicity, we report scores rounded to one decimal while the rankings are based on our unrounded scores. Provinces and states with the same rounded scores will therefore have different rankings. This difference does not imply that higher-ranked states have greatly higher economic freedom.

and 2010 are displayed in table 3.1 and table 3.2 and the component scores and rankings in 2010 in table 3.3 and table 3.4 (pp. 43–46). Guanajuato ranked well due to its relatively low government employment, relatively strong judicial institutions, and low union density. A more trustworthy property-rights registry, lower unionization, and lower government consumption helped Chihuahua to rank second. Chiapas scored poorly mostly because of the significant transfers and subsidies, and the poor quality of the judicial system and Tlaxcala's penultimate position was due to its judicial system, and high transfers and subsidies. Distrito Federal ranks 21<sup>st</sup>.

There is a clear discrepancy between rankings in the 2008 report and those in the subsequent indices. To some extent, this would be expected given the improvements made in the updated construction but there would be differences without the improvements for Components 1A, 1B, 2A, 2B, and 2D, which all are estimated using state GDP in the denominator. Mexico has significantly changed its methodology in computing GDP for states beginning in 2003 (INEGI, 2012). Presumably, the Instituto Nacional de Estadística, y Geografía (INEGI) will use the same methodology in the future and therefore it was necessary to update the scores with the new GDP measures. It should be noted that the changes in GDP are not trivial. For instance, the improvement in Campeche's ranking from 4<sup>th</sup> to first in 2003 can be explained to some extent by the new measure of GDP, which in this case results in much lower government expenditures and tax revenues as a percentage of GDP.

In this year's report, we decided to use the GDP measure excluding oil extraction because we believe that this creates a distortion that does not allow GDP to reflect the well-being of the citizens of a state since most of the gains from oil extraction are redistributed among the states. For instance, Campeche's gross state product including oil extraction is MX\$801,425; using an exchange rate of 13 pesos per dollar this translates to US\$61,648 (Banco de Mexico, 2012). This is higher than the US average of \$48,700 (Regional Economic Information System, 2012). As a result of this adjustment that excludes oil extraction, Campeche drops from the 1<sup>st</sup> in last year's report to the 20<sup>th</sup> rank in this year's report.

These measures are imperfect for many reasons. First of all, it is difficult to determine what expenditures should be included in transfers and subsidies. The accounts of the Mexican government include a category called "Transfers, Subsidies, and Assistance" in the state and local public finance reports. However, since most of the expenditures originate from the central government, it is quite likely that some other expenditures should be included as well. This requires further investigation. Another problem has to do with the way in which payroll taxes for social security are reported. Despite our best efforts, we have been unable to obtain these amounts at the state level. We do have national social-security tax revenues but are unable to get these by state. We calculate national social-security expenditures as a percentage of national GDP and assume these to be constant across all states.

Another problem is that the value-added tax paid by all Telmex customers is consolidated in Distrito Federal even though consumption of this service is taking place throughout the country. Finally, a problem that we discovered last year is that Distrito Federal had negative tax receipts for some tax categories in recent years.

				Sco	ores			
	2003	2004	2005	2006	2007	2008	2009	2010
Aguascalientes	7.48	7.56	7.58	7.59	7.29	7.04	6.83	6.87
Baja California	7.88	7.97	8.04	7.91	7.79	7.75	7.59	7.38
Baja California Sur	6.48	6.42	6.31	5.98	6.05	6.64	6.47	6.61
Campeche	6.99	6.99	7.04	6.91	6.46	6.23	6.31	6.15
Coahuila	7.52	7.61	7.62	7.68	7.47	7.55	7.33	7.18
Colima	6.31	6.27	6.15	6.06	6.04	5.78	5.69	5.60
Chiapas	5.80	5.75	5.85	5.79	5.42	5.48	5.11	5.34
Chihuahua	7.69	7.80	7.84	7.77	7.77	7.89	7.58	7.49
Distrito Federal	5.76	6.10	6.26	6.59	6.35	6.77	6.11	6.08
Durango	6.23	6.47	6.58	6.50	6.58	6.60	6.28	6.58
Guanajuato	7.71	7.97	8.15	8.17	8.11	8.10	7.91	7.98
Guerrero	6.01	6.08	6.16	5.94	6.23	5.99	5.73	5.64
Hidalgo	6.80	6.89	6.71	6.68	6.67	6.88	6.60	6.59
Jalisco	7.33	7.38	7.39	7.27	7.17	7.03	6.78	6.92
México	6.97	7.14	7.18	7.09	6.90	6.90	6.78	6.84
Michoacán	6.91	7.00	6.93	6.94	6.98	7.23	6.90	6.79
Morelos	7.10	7.07	6.98	6.82	6.78	6.68	6.56	6.59
Nayarit	5.66	6.10	6.52	6.90	6.46	6.18	5.85	5.94
Nuevo León	7.34	7.54	7.73	7.83	7.55	7.54	7.33	7.23
Oaxaca	6.09	6.16	6.24	6.01	5.84	5.71	5.28	5.35
Puebla	6.61	6.82	7.06	6.93	6.84	7.09	6.87	6.98
Querétaro	7.22	7.51	7.76	7.68	7.55	7.51	7.33	7.30
Quintana Roo	6.94	6.83	6.80	6.87	6.64	6.41	6.14	5.96
San Luis Potosí	6.50	6.71	6.90	6.99	6.92	7.09	6.75	6.79
Sinaloa	6.81	7.01	7.09	7.02	7.06	7.18	6.86	6.89
Sonora	6.81	6.97	7.19	7.34	7.25	7.13	6.80	6.69
Tabasco	5.95	5.90	5.77	5.85	5.95	6.13	5.88	5.96
Tamaulipas	6.15	6.14	6.22	5.94	5.57	5.57	5.31	5.34
Tlaxcala	5.69	5.83	5.89	5.80	5.67	5.47	5.37	5.26
Veracruz	6.11	6.04	6.03	6.00	6.12	6.07	5.95	5.97
Yucatán	7.19	7.30	7.26	7.09	7.18	7.20	7.05	7.21
Zacatecas	6.28	6.40	6.37	6.25	6.14	5.94	5.93	6.04

# Table 3.1: Economic Freedom in the Mexican States, Overall Scores, 2003–2010

				Overall ra	nk by year			
	2003	2004	2005	2006	2007	2008	2009	2010
Aguascalientes	5	5	7	7	7	13	11	11
Baja California	1	1	2	2	2	3	2	3
Baja California Sur	20	21	23	27	26	19	18	16
Campeche	11	14	14	16	20	22	19	20
Coahuila	4	4	6	5	6	4	4	7
Colima	21	23	28	24	27	28	28	28
Chiapas	29	32	31	32	32	31	32	30
Chihuahua	3	3	3	4	3	2	3	2
Distrito Federal	30	26	24	21	22	17	22	21
Durango	23	20	20	22	19	20	20	19
Guanajuato	2	1	1	1	1	1	1	1
Guerrero	27	28	27	28	23	26	27	27
Hidalgo	17	16	19	20	17	16	16	17
Jalisco	7	8	8	9	10	14	13	9
México	12	10	11	10	14	15	13	12
Michoacán	14	13	16	14	12	7	8	13
Morelos	10	11	15	19	16	18	17	17
Nayarit	32	26	21	17	20	23	26	26
Nuevo León	6	6	5	3	4	5	4	5
Oaxaca	26	24	25	25	29	29	31	29
Puebla	18	18	13	15	15	11	9	8
Querétaro	8	7	4	5	4	6	4	4
Quintana Roo	13	17	18	18	18	21	21	24
San Luis Potosí	19	19	17	13	13	11	15	13
Sinaloa	15	12	12	12	11	9	10	10
Sonora	15	15	10	8	8	10	12	15
Tabasco	28	30	32	30	28	24	25	24
Tamaulipas	24	25	26	28	31	30	30	30
Tlaxcala	31	31	30	31	30	32	29	32
Veracruz	25	29	29	26	25	25	23	23
Yucatán	9	9	9	10	9	8	7	6
Zacatecas	22	22	22	23	24	27	24	22

# Table 3.2: Economic Freedom in the Mexican States, Overall Ranks, 2003–2010

	Score by component												
	1A	1B	2A	2B	2C	2D	3A	3B	3C	4A	4B	4C	4D
Aguascalientes	8.6	6.7	8.4	8.0	9.4	9.0	6.0	3.7	8.0	4.9	1.9	6.0	8.4
Baja California	7.5	7.7	8.0	8.0	8.5	9.0	6.9	7.5	7.3	7.7	4.0	6.4	7.1
Baja California Sur	7.5	4.8	8.9	8.0	8.2	9.8	6.2	0.1	6.7	8.4	4.2	6.4	10.0
Campeche	5.4	6.4	8.7	8.0	8.8	9.3	9.3	0.9	6.8	4.6	2.8	3.7	6.4
Coahuila	5.8	8.8	9.0	8.0	8.9	9.7	6.7	6.2	5.7	6.9	4.9	7.0	6.4
Colima	7.9	5.3	0.9	8.0	9.0	0.0	6.0	4.1	6.7	8.2	4.4	5.2	5.2
Chiapas	2.3	1.0	9.5	8.0	9.4	9.9	4.3	6.6	7.3	6.4	3.8	0.7	6.8
Chihuahua	8.2	6.5	8.5	8.0	8.9	9.4	6.3	7.1	7.6	7.7	3.0	10.0	7.1
Distrito Federal	9.3	9.3	0.6	8.0	6.8	6.2	9.8	1.8	7.5	6.9	3.7	1.3	1.1
Durango	7.5	5.7	9.6	8.0	9.4	9.8	3.8	3.9	7.0	8.2	4.8	0.4	8.8
Guanajuato	7.1	8.3	9.3	8.0	9.2	9.8	5.5	8.9	8.6	10.0	8.0	5.3	6.8
Guerrero	5.4	0.6	9.6	8.0	9.0	9.8	5.4	6.5	6.5	5.4	3.4	6.4	2.1
Hidalgo	7.8	4.4	9.5	8.0	9.2	9.8	5.5	5.6	8.1	7.1	4.8	2.3	4.6
Jalisco	7.4	8.1	8.5	8.0	8.5	9.5	6.5	8.5	6.6	4.3	2.5	4.3	5.3
México	6.4	5.5	8.7	8.0	8.6	9.5	7.4	7.1	6.4	9.7	6.2	5.0	1.9
Michoacán	3.3	8.2	8.8	8.0	9.1	9.0	6.0	7.0	7.2	9.1	5.5	3.0	6.3
Morelos	6.3	5.2	9.0	8.0	8.9	9.6	7.4	6.3	7.0	4.5	2.7	5.2	7.3
Nayarit	3.8	2.6	9.2	8.0	8.8	9.7	4.3	3.1	5.5	8.3	5.2	7.2	8.6
Nuevo León	9.3	8.8	7.1	8.0	8.4	8.8	8.6	7.2	4.8	5.3	3.7	4.6	5.9
Оахаса	1.6	2.2	9.5	8.0	9.0	9.8	5.4	6.4	6.3	8.7	3.9	1.5	3.6
Puebla	5.8	8.1	9.4	8.0	9.4	9.8	6.8	9.8	7.0	3.0	0.9	5.2	6.8
Querétaro	8.1	7.4	8.4	8.0	8.4	9.7	8.9	7.5	6.1	4.9	4.0	5.3	7.2
Quintana Roo	6.2	6.4	8.6	8.0	8.0	9.4	5.1	4.0	5.4	4.8	2.9	1.6	7.7
San Luis Potosí	8.0	5.5	9.4	8.0	9.2	9.9	6.1	6.2	4.7	9.2	4.4	0.9	7.9
Sinaloa	8.3	5.0	9.1	8.0	9.2	9.7	3.4	6.7	7.2	8.1	6.1	4.9	5.5
Sonora	7.3	6.5	8.9	8.0	9.0	9.4	4.9	5.9	5.5	6.0	5.4	4.7	6.3
Tabasco	2.2	4.7	8.6	8.0	8.7	9.4	6.3	2.3	7.8	8.1	6.8	5.3	5.0
Tamaulipas	7.4	7.1	2.8	8.0	9.0	2.5	6.5	5.4	2.2	2.4	1.6	4.1	7.4
Tlaxcala	3.3	2.2	9.6	8.0	9.6	9.8	5.3	6.2	6.5	4.6	2.0	0.1	5.3
Veracruz	3.1	7.2	8.1	8.0	9.2	8.3	6.1	5.8	6.0	4.4	1.2	4.7	7.2
Yucatán	6.8	7.0	9.3	8.0	10.0	9.7	3.8	6.2	7.9	8.8	4.8	5.1	8.2
Zacatecas	2.5	5.7	8.8	8.0	7.4	9.8	5.3	3.0	6.0	8.4	3.4	7.7	7.6

# Table 3.3: Economic Freedom in the Mexican States, Scores for Components, 2010

	Rank by component												
	1A	1B	2A	2B	2C	2D	3A	3B	3C	4A	4B	4C	4D
Aguascalientes	3	13	26	1	6	27	17	26	3	24	29	8	4
Baja California	10	8	28	1	26	25	7	4	8	14	15	6	13
Baja California Sur	12	25	15	1	29	5	14	32	17	7	14	5	1
Campeche	24	17	19	1	21	24	2	31	15	26	25	23	18
Coahuila	22	3	13	1	18	12	9	17	26	18	8	4	18
Colima	8	22	31	1	17	32	19	23	16	10	13	14	26
Chiapas	30	31	4	1	5	2	29	11	9	19	18	30	15
Chihuahua	5	15	24	1	19	23	12	8	6	14	23	1	13
Distrito Federal	1	1	32	1	32	30	1	30	7	17	19	28	32
Durango	11	18	3	1	3	4	31	25	13	10	9	31	2
Guanajuato	16	4	10	1	8	6	21	2	1	1	1	9	15
Guerrero	23	32	1	1	13	9	23	12	20	21	21	6	30
Hidalgo	9	27	5	1	9	10	20	21	2	16	9	25	28
Jalisco	13	7	23	1	25	19	11	3	18	30	27	21	25
México	18	21	20	1	24	18	5	7	21	2	3	16	31
Michoacán	26	5	18	1	12	26	18	9	10	4	5	24	20
Morelos	19	23	14	1	20	17	6	14	14	28	26	12	10
Nayarit	25	28	11	1	22	13	28	27	28	9	7	3	3
Nuevo León	2	2	29	1	28	28	4	6	30	22	20	20	22
Oaxaca	32	30	6	1	15	8	22	13	22	6	17	27	29
Puebla	21	6	7	1	4	11	8	1	12	31	32	12	15
Querétaro	6	9	25	1	27	16	3	5	23	23	15	11	11
Quintana Roo	20	16	22	1	30	20	26	24	29	25	24	26	7
San Luis Potosí	7	20	8	1	10	1	15	18	31	3	12	29	6
Sinaloa	4	24	12	1	7	15	32	10	11	12	4	17	23
Sonora	15	14	16	1	16	22	27	19	27	20	6	18	20
Tabasco	31	26	21	1	23	21	13	29	5	12	2	9	27
Tamaulipas	14	11	30	1	14	31	10	22	32	32	30	22	9
Tlaxcala	27	29	2	1	2	7	25	15	19	26	28	32	24
Veracruz	28	10	27	1	11	29	16	20	24	29	31	19	11
Yucatán	17	12	9	1	1	14	30	16	4	5	11	15	5
Zacatecas	29	19	17	1	31	3	24	28	25	7	22	2	8

# Table 3.4: Economic Freedom in the Mexican States, Ranks for Components, 2010

Note: Ranks in 2B are the same for all states because there are no state and local income taxes and the federal rates and thresholds are the same for all states.

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These were actually subsidies.<sup>6</sup> The concept of economic freedom does not include the notion that negative taxes enhances economic freedom. The fact that transfers and subsidies count against states indicates that they actually have the opposite impact. We deal with these cases by replacing the negative values with zeroes in the instances in which they occur and assume that these subsidies are included in the transfers and subsidies reported by the government. The problem is whether some of the positive numbers include some of these subsidies. We have no way of knowing and therefore the level of taxation may be underestimated in some cases. We hope to obtain a better understanding of the accounts in order to calculate these measures with more certainty in the future.

There is no doubt other problems with the measures will be discovered as individuals knowledgeable of the Mexican accounts become aware of our measures. This project is a work in progress and we welcome constructive criticism on how we can improve the measure in the future. These calculations do pick up most of what we are trying to estimate for a comparison with the United States and Canada. Despite their imperfections, these data should be useful to researchers interested in investigating the impact of economic freedom on various economic factors within Mexico. We will continue to search for ways to improve our estimates in the future and discuss below some measures considered for a future index of economic freedom in Mexico.

# The relationship between economic freedom and average wages in Mexico

The 2008 publication demonstrated the relationship between economic freedom and GDP per capita in Mexico in the year 2003. It exhibited a clear positive relationship between the two. As discussed above, the newly up-dated GDP measures are significantly different from the old measures. Although the same positive relationship holds, it is doubtful that GDP per capita can be considered a good measure for the standard of living of the people of Mexico. GDP may still be considered the best measure for the size of the economy but, due to significant dependence on the revenue of PEMEX, the state-owned oil company, which is transferred across the country, it is less useful as a measure of income per capita. Thus, we decided to look at a different measure, average daily wages.

Figure 3.3 demonstrates a positive relationship between the two variables by analyzing average salaries by economic freedom quintile. The states belonging to the highest quintile averaged a salary of 198 Mexican pesos while those belonging to the bottom quintile averaged only MX\$168 per day, a difference of 18%. Keep in mind that this graph is just for illustrative purposes and not intended to claim strong statistical relationships. More sophisticated econometric analysis is necessary to determine the actual strength of the relationship between these variables in the case of Mexico. As we did for the United States and Canada, we conducted two regressions analyzing the relationship between economic freedom and wages and

<sup>[6]</sup> We are grateful to Adolfo Gutiérrez, who pointed out these two anomalies to us.



# Figure 3.3: Average daily wage (2010 pesos) and average economic freedom of Mexican states, 2003–2010

the growth in economic freedom and the growth in wages, and found the results to be statistically insignificant. This could be due to the federalist system in Mexico, where it is difficult for state and local governments to differentiate from the federal policies. The shorter time series and the difficulties in constructing the index may also be factors in the lower level of significance. Future improvements to the index for Mexico and increases in the time covered may well increase the significance in coming years.

# Measures considered for a future index of economic freedom in Mexico

The methodology of the index of economic freedom in Mexican states (EFM) as currently constructed is consistent with the original index with the few adjustments that have already been discussed. There are various measures under consideration as components in future indexes. The World Bank (2010), as part of its "Doing Business" project, publishes subnational indices for various countries including Mexico. These reports include measures for all Mexican states of the cost of doing business, obtaining construction permits, registering property,<sup>7</sup> and enforcing contracts. Unfortunately, these measures do not extend back many years for all states and are constructed using major cities from each state rather than the states as a whole. However, beginning in 2007, there are measures for all states and we intend to update the index of economic freedom in Mexican states by including some of these measures.

Issues with the methodology that need to be sorted out are whether to consider additional areas of economic freedom for the index and how these components should be included in the future. Rather than construct an improvised index at this

<sup>[7]</sup> Component 4C of the current index is one of these measures.

time, it would be better to wait for feedback in determining how to go forward on this issue. The biggest concern is that many of the years for which economic freedom has been constructed could no longer be estimated and there would be fewer measured years of economic freedom. The simplest way to deal with this would be similar to the solution used by Gwartney and Lawson (2011) in constructing the world indices. They impute missing values by analyzing correlations of the measures in the years when all the data are available. This, admittedly, is not the perfect solution but would most likely be the best available given the lack of data.

Another important issue for an index of economic freedom in Mexico is how one measures the impact of minimum wage controls in Mexico. The central government in Mexico mandates minimum daily wages for 84 professions. In the future, it may be better to measure the impact of the minimum wages by occupation based on the relative number of those working in an occupation in each state.<sup>8</sup>

# Conclusion

This report has presented the latest version of the index of economic freedom in Mexico, for the years 2003 to 2010. These results are much improved from the initial version of the index published in 2008 (Ashby, 2008). However, the project is still developing and the methodology and results may change based on any short-comings in the data that are discovered. Some of the components that are introduced in this paper may very well not be included in future constructions of the index if they are deemed unreliable or more suitable substitutes are found. But, it is encouraging that the data have improved significantly in recent years, which suggests that the index will only get better through time. In the meantime, this index should serve as a valuable tool in analyzing the institutions of Mexican states.

In 2010, Guanajuato, Chihuahua, and Baja California ranked highest in economic freedom in Mexico while Tlaxcala, Chiapas, and Tamaulipas had the lowest levels of economic freedom. Individuals in the most free states have higher wages than those in lower quintiles.

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<sup>[8]</sup> We thank James Gwartney for this suggestion.

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# Appendix A Methodology

# **Calculating the scores**

To avoid subjective judgments, objective methods were used to calculate and weight the components. For all components, each observation was transformed into a number from zero to 10 using the following formula:  $(V_{max} - V_i)/(V_{max} - V_{min}) \times 10$ , where  $V_{max}$  is the largest value found within a component,  $V_{min}$  is the smallest, and  $V_i$  is the observation to be transformed. For each component, the calculation included all data for all years to allow comparisons over time.

To transform the individual components into areas and the overall summary index, Areas 1, 2, and 3 were equally weighted, and each of the components within each area was equally weighted. For example, the weight for Area 1 was 33.3%. Area 1 has three components, each of which received equal weight in calculating Area 1, or 11.1% in calculating the overall index.

The world-adjusted index adds Legal System and Property Rights and thus has four areas, each of which was equally weighted and each of the components within each area was equally weighted except for the regulation section. Regulation in the world-adjusted index has three components: labor, credit, and business, the latter two of which are added from the world index. Each of the components is equally weighted when calculating regulation and each variable is equally weighted in calculating the score for each component. More details on the calculations and data sources for the adjusted index can be found in Appendix B.

# Income tax

Calculating the income-tax component was more complicated. The component examining the top marginal income-tax rate and the income threshold at which it applies was transformed into a score from zero to 10 using Matrix 1 and Matrix 2. Canadian nominal thresholds were first converted into constant 2010 Canadian dollars by using the Consumer Price Index and then converted into US dollars using the Purchasing Power Parity between Canada and the United States for each year. US nominal thresholds were converted into real 2010 US dollars using the Consumer Price Index. This procedure is based on the transformation system found in *Economic Freedom of the World: 1975–1995* (Gwartney et al., 1996), modified for this study to take into account a different range of top marginal tax rates and income thresholds.

# Matrix 1: Income Tax Matrix for Component 2B at the All-Government Level

# Matrix 2: Income Tax Matrix for Component 2B at the Subnational Level

	Incon	ne Threshold (US\$2010)	Level	Income Threshold Level (US\$2010)					
Top Marginal Tax Rate	Less than \$55,826	\$55,826 to \$111,652	More than \$111,652	Top Marginal Tax Rate	Less than \$55,826	\$55,826 to \$111,652	More than \$111,652		
27% or less	10.0	10.0	10.0	1.5% or less	10.0	10.0	10.0		
27% to 30%	9.0	9.5	10.0	1.5% to 3.0%	9.0	9.5	10.0		
30% to 33%	8.0	8.5	9.0	3.0% to 4.5%	8.0	8.5	9.0		
33% to 36%	7.0	7.5	8.0	4.5% to 6.0%	7.0	7.5	8.0		
36% to 39%	6.0	6.5	7.0	6.0% to 7.5%	6.0	6.5	7.0		
39% to 42%	5.0	5.5	6.0	7.5% to 9.0%	5.0	5.5	6.0		
42% to 45%	4.0	4.5	5.0	9.0% to 10.5%	4.0	4.5	5.0		
45% to 48%	3.0	3.5	4.0	10.5% to 12.0%	3.0	3.5	4.0		
48% to 51%	2.0	2.5	3.0	12.0% to 13.5%	2.0	2.5	3.0		
51% to 54%	1.0	1.5	2.0	13.5% to 15.0%	1.0	1.5	2.0		
54% to 57%	0.0	0.5	1.0	15.0% to 16.5%	0.0	0.5	1.0		
57% to 60%	0.0	0.0	0.5	16.5% to 18.0%	0.0	0.0	0.5		
60% or more	0.0	0.0	0.0	18.0% or more	0.0	0.0	0.0		

Note: The range of the top marginal tax rates in Matrix 1 and Matrix 2 should be written "27.00% to 29.99%" or "1.50% to 2.99%" and so on but for convenience we have written them as "27% to 30%" or "1.5% to 3.0%."

Matrix 1 was used in calculating the score for Component 2B, Top Marginal Income Tax Rate and the Income Threshold at Which It Applies, at the all-government level; Matrix 2 was used to calculate the score for Component 2B at the subnational level.

In setting the threshold levels for income taxes at the subnational level, we faced an interesting quandary. In the United States, most state thresholds were below US federal thresholds in the 1980s and 1990s. In Canada, provincial thresholds were frequently higher than federal thresholds. Whenever the provincial or state threshold was higher than the federal threshold, the federal threshold was used at the sub-national level since, when a provincial threshold is above the national level, the cause is typically the imposition of a relatively small surcharge on those earning high incomes. Because of the structure of these matrixes, this can produce perverse scoring results. For example, in Matrix 2 a jurisdiction gets a score of 2.5 if it has a top marginal income-tax rate of, say, 12.5% for incomes over \$55,826. Let us say the jurisdiction imposes a surcharge for income earners above \$111,652, increasing the top marginal income-tax rate to 13%. In Matrix 2, even though additional taxes in the form of a surcharge have been imposed, the state's score perversely increases to 3.0 because of the increase in the threshold level.

Our decision to use the federal threshold as the default threshold when the provincial threshold was higher is, frankly, a matter of judgment. Thus, it was important to understand whether this would affect the results significantly. To see whether this was so, we calculated the overall index both ways and found that changes were small and that the overall results were not significantly affected.

# **Adjustment factors**

Due to constitutional differences and variations in policy, in the United States subnational jurisdictions take a proportionately smaller share of overall government spending than in Canada. In 2002, for instance, provinces and local governments accounted for about 79% of government consumption in Canada while in the United States state and local government are responsible for 63% of government consumption, just 80% of the level in Canada (<sup>0.63</sup>/<sub>0.79</sub> = 0.80). This is what we term the adjustment factor:  $R_U/R_c$ , where  $R_U$  is the percent of total government spending at the state level in the United States, and  $R_c$  is the percent of total government spending at the provincial level in Canada. Because of this difference in government structure in the United States and Canada, a direct comparison would not be appropriate. Instead, we use this adjustment factor, multiplying provincial and local government consumption in Canada by 0.80 so that it will be comparable to US data. The adjustment factor itself is adjusted every year to the relative differences in spending patterns between Canada and the United States.

At the subnational level, similar adjustment factors are calculated for each year for each component in Areas 1 and 2 as well as for sub-component 3Aii: Government Employment as a Percentage of Total State/Provincial Employment. For example, the adjustment factor for 2A: Total Tax Revenue as a Percentage of GDP at the subnational level is calculated as the percentage of total government revenue at a state level in the United States divided by the percentage of total government revenue at a provincial level in Canada. No adjustment factor is necessary at the all-government level because every level of government is counted. Note that Component 2D: Sales Tax Collected as a Percentage of GDP is not adjusted because the United States does not have a federal general sales tax and Canada does.

We faced another common problem in comparing statistics across time, changes in the structure of some series over time. Similarly, some Canadian spending categories were not strictly comparable to those in the United States. This required the use of judgment in some cases. Spending on medical care, for example, is structured as government consumption in Canada and as a set of transfer programs in the United States. Given that the index captures the impact of both government consumption and of transfer programs, we decided the most accurate method of accounting was to reflect the actual nature of the spending, a transfer program in the United States and government consumption in Canada, rather than artificially include one or other in an inappropriate component.

A further complication arose in applying the adjustment factor to the incometax component at the subnational level. To construct this adjustment factor, the Canadian top marginal tax rates at the subnational level are multiplied by the ratio of (a) the percentage of total personal tax revenue at a state level in the United States; and (b) the percentage of total personal tax revenue at a provincial level in Canada. For example, in 2002, in Canada, provinces collected 37% of the income-tax revenue raised in Canada. In the United States, states collected 19% of all income taxes. Thus, <sup>1</sup>%<sub>7</sub> equals 51%. In Ontario, for example, the top marginal rate in 2002 was 17.4%. This is reduced to 8.9% when the adjustment factor is applied.

## Other adjustments

Many data sources that are used to calculate tax burdens and government expenditures are not available for every year for Canada and the United States. In some cases these data are available at the subnational level but not at the federal level or vice versa. When this is the case, we use the values for the most recent year available.

The Tax Foundation has calculated the federal tax burden by US state up to the year 2005 using sophisticated techniques but these have not been updated in recent years. We impute the federal tax burden by using the federal tax collections by US state provided by the Internal Revenue Service. We calculate the percentage change in tax revenues between each year after 2005 up to 2010 and assume that the tax burden increased by this same percentage. Using the data provided by the Tax Foundation in 2005, we are able to estimate the tax burden for 2006 to 2010. It should be noted that tax revenues are not conceptually identical to the tax burden. As a simple illustration, an income-tax rate of 100% would certainly cause a significant tax burden but would yield virtually no tax revenue. We analyzed the correlation of tax revenues from the IRS and the tax burden from the Tax Foundation in years when both were available and found the correlation to be high. Given this finding, the method discussed herein is considered to be a reasonable, albeit imperfect, method of estimating the tax burden until updated data are provided by the Tax Foundation or another entity.

Finally, we made an adjustment to how we calculate the union score (3C). In past reports, we calculated the union score by regressing the unionization rate on government employment for each given year using the following equation: Unionization<sub>i</sub> =  $\alpha$  +  $\beta$  Government<sub>i</sub> + residual<sub>i</sub>. Previously, we calculated the score for 3C using the residual only. However, by definition the mean of the residual will always be zero and therefore the score does not vary through time even though unionization rates declined significantly over the past 30 years. For this report, we took the estimated intercept,  $\alpha$ , and we added it to the residual. Consistent with our prior assumptions, we found that this did seem to account for the changes in unionization rates through time and average union scores increase through time.

# Appendix B Explanation of Components and Data Sources

# Area 1 Size of Government

## Component 1A General Consumption Expenditures by Government as a Percentage of GDP

General consumption expenditure is defined as total expenditures minus transfers to persons, transfers to businesses, transfers to other governments, and interest on public debt. Data for Quebec is adjusted for Quebec abatement at the subnational level.

## Sources for Canada

Special request from Finance Canada, Federal-Provincial Relations and Social Policy Branch, Federal-Provincial Relations Division (November 2007).

Statistics Canada, Provincial and Territorial Economic Accounts, 2012.

Statistics Canada, Public Institutions Division, Financial Management System, 2005, 2007, 2008.

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US Census Bureau, Consolidated Federal Funds Report (various editions).

US Census Bureau, Statistical Abstract of the United States (various editions).

US Department of Commerce, Bureau of Economic Analysis. <a href="http://www.bea.gov/">http://www.bea.gov/</a> (May 11, 2012).

# Component 1B Transfers and Subsidies as a Percentage of GDP

Transfers and subsidies include transfers to persons and businesses such as welfare payments, grants, agricultural assistance, food-stamp payments (US), housing assistance, and so on. Foreign aid is excluded. Data for Quebec is adjusted for Quebec abatement at the subnational level.

### Sources for Canada

Special request from Finance Canada, Federal-Provincial Relations and Social Policy Branch, Federal-Provincial Relations Division (November, 2007). Statistics Canada, *Provincial and Territorial Economic Accounts, 2012*.

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US Census Bureau, Consolidated Federal Funds Report (various editions).

US Census Bureau, Statistical Abstract of the United States (various editions).

US Department of Commerce, Bureau of Economic Analysis, <a href="http://www.bea.gov/">http://www.bea.gov/</a> (May 11, 2012).

## Component 1C Social Security Payments as a Percentage of GDP

Payments by Employment Insurance, Workers Compensation, and various pension plans are included in this component.

Sources for Canada Statistics Canada, Provincial and Territorial Economic Accounts, 2012.

### Sources for the United States

Special request from US Census Bureau, Governments Division (December 14, 2007). US Census Bureau (2012). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2010)*, <a href="http://www.census.gov/govs/estimate/">http://www.census.gov/govs/estimate/</a>.

US Department of Commerce, Bureau of Economic Analysis, <<u>http://www.bea.gov/></u> (May 11, 2012).

# Area 2 Takings and Discriminatory Taxation

# Component 2A Total Tax Revenue as a Percentage of GDP

Total Tax Revenue is defined as a sum of income taxes, consumption taxes, property and sales taxes, contributions to social security plans, and various other taxes. Note that natural resource royalties are not included. Data for Quebec is adjusted for Quebec abatement at the subnational level.

## Sources for Canada

Special request from Finance Canada, Federal-Provincial Relations and Social Policy Branch, Federal-Provincial Relations Division (November, 2007).

Statistics Canada, Provincial and Territorial Economic Accounts, 2012.

## Sources for Mexico

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US Department of Commerce, Bureau of Economic Analysis, <<u>http://www.bea.gov/></u> (May 11, 2012).

Tax Foundation (Washington, DC), <http://www.taxfoundation.org/research/ show/22685.html> (December 19, 2007).

# Component 2B Top Marginal Income Tax Rate and the Income Threshold at Which It Applies

See Matrix 1 and Matrix 2 in Appendix A for information on how the final scores were calculated. Data for Quebec is adjusted for Quebec abatement at the subnational level.

# Sources for Canada

Baldwin, John, and Ryan Macdonald (2010). *PPPs: Purchasing Power or Producing Power Parities?* Economic Analysis Research Paper Series. Cat. 11F0027M. No. 058. Statistics Canada.

Canadian Tax Foundation, *Canadian Tax Journal, Provincial Budget Roundup* (2003, 2002, 2001, 2000) (by Deborah L. Ort and David B. Perry).

Canadian Tax Foundation, *Finances of the Nation* (various issues).

Palacios, Milagros (2008). *Purchasing Power Parity, United States and Canada,* 1981–2005. Fiscal Studies, Fraser Institute.

Statistics Canada, CANSIM, 2012.

Statistics Canada, National Economic Accounts, 20112.

Statistics Canada, Provincial Economic Accounts, 2012.

### Sources for Mexico

Organisation of Economic Co-Operation and Development. (2011). *Purchasing Power Parities for GDP and Related Indicators*. <a href="http://stats.oecd.org/Index.aspx?DataSetCode=PPPGDP">http://stats.oecd.org/Index.aspx?DataSetCode=PPPGDP</a>, as of June 4, 2012.

Servicio de Administración Tributaria (various years). *Tarifa para el Cálculo del Impuesto Sobre la rent Annual Correspondiente*. <a href="http://www.sat.gob.mx/sitio\_internet/asistencia\_contribuyente/informacion\_frecuente/isr\_anual/default.asp">http://www.sat.gob.mx/sitio\_internet/asistencia\_contribuyente/informacion\_frecuente/isr\_anual/default.asp</a>, as of May 11, 2012.

### Sources for the United States

Tax Foundation, Facts and Figures on Government Finances (various editions).

Tax Foundation (Washington, DC). [website], <http://www.taxfoundation.org/data> (Oct. 1, 2003; December 21, 2007; December, 2009).

US Department of Labor, Bureau of Labor Statistics, <<u>http://www.bls.gov/cpi/></u>(May, 2012).

US Census Bureau (2012). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2010)*, <a href="http://www.census.gov/govs/estimate/">http://www.census.gov/govs/estimate/</a>.

#### Component 2C Indirect Tax Revenue as a Percentage of GDP

Indirect tax revenue includes property taxes, contributions to social security insurance (i.e., Employment insurance, Workers Compensation, and various pension plans), and various other taxes. Income-tax revenue, sales-tax revenue, and natural resource royalties are not included in this component.

## Sources for Canada

Statistics Canada, Provincial and Territorial Economic Accounts, 2012.

#### Sources for Mexico

Centro de Estudio de las Finanzad Públicas [CEFP] (2009). *Estadisticas Estatales Indicadores de Finanzas Públicas*.

Instituto Nacional de Estadística Geografía e Informática [INEGI] (various years a). *Estadística de Finanzas Públicas Estatales y Municipales*. <a href="http://www.inegi.org.mx/inegi/default.aspx?c=10961&s=est">http://www.inegi.org.mx/inegi/default.aspx?c=10961&s=est</a>, as of June 8, 2012.

Secretaría de Hacienda y Crédito Público.(various years). *Impuestos Federales*. US Department of Labor, Bureau of Labor Statistics, <<u>http://www.bls.gov/cpi/></u>(May 11, 2012)

### Sources for the United States

Tax Foundation, *Facts and Figures on Government Finances* (various editions). Tax Foundation (Washington, DC), <<u>http://www.taxfoundation.org/research/</u>

show/22685.html> (December 19, 2007).

US Census Bureau (2012). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2010), <http://www.census.gov/govs/estimate/>.* 

## Component 2D Sales Taxes Collected as a Percentage of GDP

Sales tax revenue includes revenue from general sales tax as well as revenue from liquor and tobacco taxes.

# Sources for Canada Statistics Canada, *Provincial and Territorial Economic Accounts*, 2012.

#### Sources for Mexico

Centro de Estudio de las Finanzad Públicas [CEFP] (2009). *Estadisticas Estatales Indicadores de Finanzas Públicas*.

Instituto Nacional de Estadística Geografía e Informática [INEGI] (various years a). *Estadística de Finanzas Públicas Estatales y Municipales*. <a href="http://www.inegi.org.mx/inegi/default.aspx?c=10961&s=est">http://www.inegi.org.mx/inegi/default.aspx?c=10961&s=est</a>, as of June 8, 2012.

Secretaría de Hacienda y Crédito Público.(various years). Impuestos Federales.

Sources for the United States

Tax Foundation, Facts and Figures on Government Finances (various editions).

US Census Bureau (2012). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2010)*, <a href="http://www.census.gov/govs/estimate/">http://www.census.gov/govs/estimate/</a>>.

# **Area 3 Regulation**

## Component 3A Labor Market Freedom

### 3Ai Minimum Wage Legislation

This component was calculated as minimum wage multiplied by 2,080, which is the full-time equivalent measure of work hours per year (52 weeks multiplied by 40 hours per week) as a percentage of per-capita GDP. For the Canadian provinces, provincial minimum wage was used to compute both of the indices (subnational and all-government). For US states, we used state minimum wage at the subnational level whereas at the all-government level federal minimum wage was used whenever the federal minimum wage was higher than the state minimum wage.

#### Sources for Canada

Human Resources Development Canada, <http://srv116.services.gc.ca/dimt-wid/sm-mw/menu.aspx?lang=eng> (May 24, 2011).

Statistics Canada, Provincial Economic Accounts, 2012.

## Sources for Mexico

Comisión Nacional de los Salarios Mínimos [Conasami] (various years). *Tabla de Salarios Mínimos Generales y Profesionales por Área Geográfica*. <a href="http://www.conasami.gob.mx/t\_sal\_mini\_prof.html">http://www.conasami.gob.mx/t\_sal\_mini\_prof.html</a>, as of May 25, 2011.

## Sources for the United States

Division of External Affairs, Wage and Hour Division, Employment Standards Administration, US Department of Labor, <a href="http://www.dol.gov/whd/state/state.htm">http://www.dol.gov/whd/state/state.htm</a> (May 24, 2011).

Special requests from various state Labor Departments.

US Department of Commerce, Bureau of Economic Analysis, <a href="http://www.bea.gov/">http://www.bea.gov/</a> (May 11, 2012).

3Aii Government Employment as a Percentage of Total State/Provincial Employment Government employment includes public servants as well as those employed by government business enterprises. Military employment is excluded.

#### Sources for Canada

Statistics Canada, Provincial and Territorial Economic Accounts, 2012.

Statistics Canada, Public Institutions Division, Financial Management System (various years).

### Sources for Mexico

Instituto Nacional de Estadística Geografía e Informática [INEGI] (various years b). *Encuesta Nacional de Ocupación y Empleo: Indicadores Trimestrales.* <a href="http://interdsap.stps.gob.mx:150/302\_0058enoe.asp">http://interdsap.stps.gob.mx:150/302\_0058enoe.asp</a>, as of June 7, 2012.

## Sources for the United States

Regional Economic Information System, Bureau of Economic Analysis, US Department of Commerce, <a href="http://www.bea.gov/> (May 16, 2012">http://www.bea.gov/> (May 16, 2012)</a>.

US Department of Labor, Bureau of Labor Statistics, <<u>http://www.bls.gov/lau/></u> (May 11, 2012).

## 3Aiii Union Density

For this component, our goal was to determine the relationship between unionization and public policy, other than the level of government employment, which is captured in 3B. We regressed union density on the size of the manufacturing sector and on the size of the government sector. Data were not available to allow a regression on rural compared to urban populations. The manufacturing sector did not prove significant while the government sector proved highly significant. Thus, the scores were determined holding public-sector employment constant.

#### Sources for Canada

Statistics Canada, CANSIM, 2011.

Statistics Canada, Labour Force Historical Review 2010 (CD-ROM).

Statistics Canada, Provincial and Terrritorial Economic Accounts, 2011.

Statistics Canada, Public Institutions Division, Financial Management System (various years).

### Sources for the United States

Barry T. Hirsch and David A. Macpherson (2009). *Union Membership and Coverage Database from the Current Population Survey*, <a href="http://www.unionstats.com/">http://www.unionstats.com/</a>> (May 18, 2012).

Regional Economic Information System, Bureau of Economic Analysis, US Department of Commerce, <a href="http://www.bea.gov/> (May 16, 2012">http://www.bea.gov/> (May 16, 2012)</a>.

US Dept. of Labor, Bureau of Labor Statistics, <http://www.bls.gov/lau/> (May 11, 2012).

# Note Data in Area 3 added for the world-adjusted index

The data used for the world-adjusted index is from *Economic Freedom of the World:* 2012 Annual Report (Gwartney, Lawson, and Hall, 2012), which is also published by the Fraser Institute. The following information about the sources of data used is quoted directly from that report. Minimum-maximum calculations are based on the 144 nations and territories covered by the world report. This is not ideal, since the minimum-maximum calculations for other components are based on data from the states and provinces. However, since the data were not typically available at the subnational level, this does provide an appropriate measure of the difference between Canada and the United States. The world data are available at <www.freetheworld. com/2012/EFWdatabase2012.xls> and are the revised data as of October 23, 2012.

# **Area 3 Regulation** (world-adjusted index)

Since, as discussed above, Canada and the United States have been diverging on scores for business and credit regulation, the world-adjusted index expands the regulatory area to include data on these areas. Labour regulation becomes one of three equally-weighted components of Area 3: Regulation, which comprises 3A: Labour market regulation; 3B: Regulation of credit markets; and 3C: Business regulations. (See Appendix A for how Area 3 is now calculated.)

## Component 3B Regulation of credit markets (component 5A in the world report)

## 3B1 Ownership of banks

Data on the percentage of bank deposits held in privately owned banks were used to construct rating intervals. Countries with larger shares of privately held deposits received higher ratings. When privately held deposits totaled between 95% and 100%, countries were given a rating of 10. When private deposits constituted between 75% and 95% of the total, a rating of 8 was assigned. When private deposits totaled between 40% and 75% of the total, the rating was 5. When private deposits totaled between 10% and 40%, countries received a rating of 2. A zero rating was assigned when private deposits were 10% or less of the total.

### Sources

James R. Barth, Gerard Caprio, Jr., and Ross Levine (various years), *Bank Regulation and Supervision*; James R. Barth, Gerard Caprio, and Ross Levine (2006), *Rethinking Bank Regulation: Till Angels Govern*.

### 3Bii Private sector credit

This sub-component measures the extent to which government borrowing crowds out private borrowing. If available, this sub-component is calculated as the government fiscal deficit has a share of gross saving. Since the deficit is expressed as a negative value, higher numerical values result in higher ratings. The formula used to derive the country ratings for this sub-component was  $(-V_{max} - V_i) / (V_{max} + V_{min})$  multiplied by 10.  $V_i$  is the deficit to gross investment ratio, and the values for  $V_{max}$  and  $V_{min}$  are set at 0 and -100.0% respectively. The formula allocates higher ratings as the deficit gets smaller (i.e., closer to zero) relative to gross saving.

If the deficit data are not available, the component is instead based on the share of private credit to total credit extended in the banking sector. Higher values are indicative of greater economic freedom. Thus, the formula used to derive the country ratings for this sub-component was  $(V_i - V_{min}) / (V_{max} - V_{min})$  multiplied by 10.  $V_i$  is the share of the country's total domestic credit allocated to the private sector and the values for  $V_{max}$  and  $V_{min}$  are set at 99.9% and 10.0% respectively. The 1990 data were used to derive the maximum and minimum values for this component. The formula allocates higher ratings as the share of credit extended to the private sector increases.

### Source

World Bank, *World Development Indicators* (various issues); International Monetary Fund, *International Financial Statistics* (various issues).

### 3Biii Interest rate controls/Negative real interest rates

Data on credit-market controls and regulations were used to construct rating intervals. Countries with interest rates determined by the market, stable monetary policy, and positive real deposit and lending rates received higher ratings. When interest rates were determined primarily by market forces and the real rates were positive, countries were given a rating of 10. When interest rates were primarily market-determined but the real rates were sometimes slightly negative (less than 5%) or the differential between the deposit and lending rates was large (8% or more), countries received a rating of 8. When the real deposit or lending rate was persistently negative by a single-digit amount or the differential between them was regulated by the government, countries were rated at 6. When the deposit and lending rates were fixed by the government and the real rates were often negative by single-digit amounts, countries were assigned a rating of 4. When the real deposit or lending rate was persistently negative by a double-digit amount, countries received a rating of 2. A zero rating was assigned when the deposit and lending rates were fixed by the government and real rates were persistently negative by a ouble-digit amount, countries received a rating of 2. A zero rating was assigned when the deposit and lending rates were fixed by the government and real rates were persistently negative by a lending rates were fixed by the government and real rates were persistently negative by a double-digit amount, countries received a rating of 2. A zero rating was assigned when the deposit and lending rates were persistently negative by a double-digit amount, countries received a rating of 2. A zero rating was assigned when the deposit and lending rates were fixed by the government and real rates were persistently negative by double-digit amounts or hyperinflation had virtually eliminated the credit market.

## Source

World Bank, *World Development Indicators* (various issues); International Monetary Fund, *International Financial Statistics* (various issues).

#### Component 3C Business regulations (component 5C in the world report)

3Ci Administrative requirements

This sub-component is based on the Global Competitiveness Report question: "Complying with administrative requirements (permits, regulations, reporting) issued by the government in your country is (1 = burdensome, 7 = not burdensome)."

#### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

### 3Cii Bureaucracy costs

This sub-component is based on the Global Competitiveness Report question: "Standards on product/service quality, energy and other regulations (outside environmental regulations) in your country are: (1 = Lax or non-existent, 7 = among the world's most stringent)".

#### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

## 3Ciii Starting a business

This sub-component is based on the World Bank's *Doing Business* data on the amount of time and money it takes to start a new limited-liability business. Countries where it takes longer or is more costly to start a new business are given lower ratings. Zero-to-10 ratings were constructed for three different variables: (1) time (measured in days) necessary to comply with regulations when starting a limited liability company, (2) money costs of the fees paid to regulatory authorities (measured as a share of per capita income) and (3) minimum capital requirements, i.e., funds that must be deposited into a company bank account (measured as a share of per capita income). These three ratings were then averaged to arrive at the final rating for this sub-component. The formula used to calculate the zero-to-10 ratings was: ( $V_{max} - V_i$ ) / ( $V_{max} - V_{min}$ ) multiplied by 10.  $V_i$  represents the variable value. The values for  $V_{max}$  and  $V_{min}$  were set at 104 days, 317%, and 1017% (1.5 standard deviations above average) and 0 days, 0%, and 0%, respectively. Countries with values outside of the  $V_{max}$  and  $V_{min}$  range received ratings of either zero or ten accordingly.

## Source

World Bank, *Doing Business* (various issues), <http://www.doingbusiness.org/>.

## 3Civ Extra payments/Bribes/Favoritism

This sub-component is based on the *Global Competitiveness Report* questions: "In your industry, how commonly would you estimate that firms make undocumented extra payments or bribes connected with the following: A - Import and export permits; B - Connection to public utilities (e.g., telephone or electricity); C - Annual tax payments; D - Awarding of public contracts (investment projects); E - Getting favourable judicial decisions. Common (=1) Never occur (=7)"; "Do illegal payments aimed at influencing government policies, laws or regulations have an impact on companies in your country? 1 = Yes, significant negative impact, 7 = No, no impact at all"; and "To what extent do government officials in your country show favouritism to well-connected firms and individuals when deciding upon policies and contracts? 1 = Always show favouritism, 7 = Never show favouritism."

## Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

## 3Cv Licensing restrictions

This sub-component is based on the World Bank's *Doing Business* data on the time in days and monetary costs required to obtain a license to construct a standard warehouse. Zero-to-10 ratings were constructed for (1) the time cost (measured in number of calendar days required to obtain a license) and (2) the monetary cost of obtaining the license (measured as a share of per capita income). These two ratings were then averaged to arrive at the final rating for this sub-component. The formula used to calculate the zero-to-10 ratings was:  $(V_{max} - V_i) / (V_{max} - V_{min})$  multiplied
by 10.  $V_i$  represents the time or money cost value. The values for  $V_{max}$  and  $V_{min}$  were set at 363 days and 2763% (1.5 standard deviations above average) and 56 days (1.5 standard deviations below average) and 0%, respectively. Countries with values outside of the  $V_{max}$  and  $V_{min}$  range received ratings of either zero or ten accordingly.

#### Source

World Bank, *Doing Business* (various issues), <http://www.doingbusiness.org/>.

### 3Cvi Cost of tax compliance

This sub-component is based on the World Bank's *Doing Business* data on the time required per year for a business to prepare, file and pay taxes on corporate income, value added or sales taxes, and taxes on labor. The formula used to calculate the zero-to-10 ratings was:  $(V_{max} - V_i) / (V_{max} - V_{min})$  multiplied by 10.  $V_i$  represents the time cost (measured in hours) of tax compliance. The values for  $V_{max}$  and  $V_{min}$  were set at 892 hours (1.5 standard deviations above average) and 0 hours, respectively. Countries with values outside of the  $V_{max}$  and  $V_{min}$  range received ratings of either zero or ten accordingly.

#### Source

World Bank, *Doing Business* (various issues), <http://www.doingbusiness.org/>.

# **Area 4 Legal System and Property Rights** (Canada and the United States; Area 2 in the world report)

### 4A Judicial independence

This component is from the *Global Competitiveness Report* question: "Is the judiciary in your country independent from political influences of members of government, citizens, or firms? No-heavily influenced (=1) or Yes-entirely independent (=7)." The question's wording has varied slightly over the years. All variables from the *Global Competitiveness Report* were converted from the original 1-to-7 scale to a 0-to-10 scale using this formula:  $EFW_i = ((GCR_i - 1) \div 6) \times 10$ .

### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

### 4B Impartial courts

This component is from the *Global Competitiveness Report* question: "The legal framework in your country for private businesses to settle disputes and challenge the legality of government actions and/or regulations is inefficient and subject to manipulation (=1) or is efficient and follows a clear, neutral process (=7)." The question's wording has varied slightly over the years.

Note: The "Rule of Law" ratings from the World Bank's *Governance Indicators Project* have been used to fill in country omissions in the primary data source since 1995.

### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http:// www.weforum.org/en/initiatives/gcp/index.htm>; World Bank, *Governance Indicators* (various years), <http://www.worldbank.org/wbi/governance/govdata/>.

### 4C Protection of property rights

This component is from the *Global Competitiveness Report* question: "Property rights, including over financial assets, are poorly defined and not protected by law (=1) or are clearly defined and well protected by law (=7)."

Note: This replaces previous *Global Competitiveness Report* question on protection of intellectual property.

### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

### 4D Military interference in rule of law and the political process

This component is based on the *International Country Risk Guide* Political Risk Component G. Military in Politics: "A measure of the military's involvement in politics. Since the military is not elected, involvement, even at a peripheral level, diminishes democratic accountability. Military involvement might stem from an external or internal threat, be symptomatic of underlying difficulties, or be a full-scale military takeover. Over the long term, a system of military government will almost certainly diminish effective governmental functioning, become corrupt, and create an uneasy environment for foreign businesses."

Note: The "Political Stability and Absence of Violence" ratings from the World Bank's *Governance Indicators Project* have been used to fill in country omissions in the primary data source since 1995.

### Sources

PRS Group, International Country Risk Guide (various issues), <http://www. prsgroup.com/ICRG.aspx>; World Bank, Governance Indicators (various years), <http://www.worldbank.org/wbi/governance/govdata/>.

### 4E Integrity of the legal system

This component is based on the *International Country Risk Guide* Political Risk Component I for Law and Order: "Two measures comprising one risk component. Each sub-component equals half of the total. The 'law' sub-component assesses the strength and impartiality of the legal system, and the 'order' sub-component assesses popular observance of the law."

### Source

PRS Group, *International Country Risk Guide* (various issues), <http://www.prsgroup.com/ICRG.aspx>.

### 4F Legal enforcement of contracts

This component is based on the World Bank's *Doing Business* estimates for the time and money required to collect a clear cut debt. The debt is assumed to equal 200% of the country's per-capita income where the plaintiff has complied with the contract and judicial judgment is rendered in his favor. Zero-to-10 ratings were constructed for (1) the time cost (measured in number of calendar days required from the moment the lawsuit is filed until payment) and (2) the monetary cost of the case (measured as a percentage of the debt). These two ratings were then averaged to arrive at the final rating for this sub-component. The formula used to calculate the zero-to-10 ratings was:  $(V_{max} - V_i) / (V_{max} - V_{min})$  multiplied by 10. V<sub>i</sub> represents the time or money cost value. The values for  $V_{max}$  and  $V_{min}$  were set at 725 days and 82.3% (1.5 standard deviations above average) and 62 days (1.5 standard deviations below average) and 0%, respectively. Countries with values outside of the  $V_{max}$  and  $V_{min}$  range received ratings of either zero or 10, accordingly.

### Source

World Bank, *Doing Business* (various issues), <http://www.doingbusiness.org/>.

### 4G Regulatory restrictions on the sale of real property

This sub-component is based on the World Bank's *Doing Business* data on the time measured in days and monetary costs required to transfer ownership of property that includes land and a warehouse. Zero-to-10 ratings were constructed for (1) the time cost (measured in number of calendar days required to transfer ownership) and (2) the monetary cost of transferring ownership (measured as a percentage of the property value). These two ratings were then averaged to arrive at the final rating for this sub-component. The formula used to calculate the zero-to-10 ratings was:  $(V_{max} - V_i) / (V_{max} - V_{min})$  multiplied by 10. V<sub>i</sub> represents the time or money cost value. The values for  $V_{max}$  and  $V_{min}$  were set at 265 days and 15% (1.5 standard deviations above average) and 0 days and 0%, respectively. Countries with values outside of the  $V_{max}$  and  $V_{min}$  range received ratings of either zero or 10, accordingly.

#### Source

World Bank, *Doing Business* (various issues), <http://www.doingbusiness.org/>.

#### 4H Reliability of Police

This component is from the *Global Competitiveness Report* question: "To what extent can police services be relied upon to enforce law and order in your country? (1 = Cannot be relied upon at all; 7 = Can be completely relied upon)".

#### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http://www.weforum.org/en/initiatives/gcp/index.htm>.

### 4I Business costs of crime

This component is from the *Global Competitiveness Report* question: "To what extent does the incidence of crime and violence impose costs on businesses in your country? (1 =To a great extent; 7 = Not at all)".

#### Source

World Economic Forum, *Global Competitiveness Report* (various issues), <http:// www.weforum.org/en/initiatives/gcp/index.htm>.

### Area 4 Legal System and Property Rights (Mexico only)

### Component 4A Impartiality of Judges

Consejo Coordinador Financiero (2011). *Ejecución de Contratos Mercantiles e Hipotecas en las Entidades Federativas*. <a href="http://www.abm.org.mx/temas\_actualidad/">http://www.abm.org.mx/temas\_actualidad/</a> estado.htm>, as of August 16, 2011.

Consejo Coordinador Financiero (2011). *Indicadores de Confiabilidad y Desarrollo Institucional Local*. <a href="http://www.abm.org.mx/temas\_actualidad/estado">http://www.abm.org.mx/temas\_actualidad/estado</a>. htm>, as of August 16, 2011.

Consejo Nacional de Población (2011). *De la Población de México 2005-2050*. <a href="http://www.conapo.gob.mx/es/CONAPO/De\_la\_poblacion\_de\_Mexico\_2005-2050">http://www.conapo.gob.mx/es/CONAPO/De\_la\_poblacion\_de\_Mexico\_2005-2050</a>, as of May 24, 2011.

Instituto Mexicano Para la Competividad [IMCO] (2006). *Competividad Estatal* 2006.

Instituto Mexicano Para la Competividad [IMCO] (2008). *Competividad Estatal de Mexico 2008*. <a href="http://www.imco.org.mx/imco/recursos/webestados/home.html">http://www.imco.org.mx/imco/recursos/webestados/home.html</a>, as of September 15, 2009.

Instituto Mexicano Para la Competividad [IMCO] (2010). *Competividad Estatal de Mexico 2010*. <a href="http://www.imco.org.mx/imco/recursos/webestados/home.html">http://www.imco.org.mx/imco/recursos/webestados/home.html</a>, as of September 15, 2011.

### Component 4B Institutional Quality of the Judicial System

Consejo Coordinador Financiero (2011). *Ejecución de Contratos Mercantiles e Hipotecas en las Entidades Federativas*. <a href="http://www.abm.org.mx/temas\_actualidad/">http://www.abm.org.mx/temas\_actualidad/</a> estado.htm>, as of August 16, 2011.

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Instituto Mexicano Para la Competividad [IMCO] (2006). *Competividad Estatal* 2006.

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Instituto Mexicano Para la Competividad [IMCO] (2010). *Competividad Estatal de Mexico 2010*. <a href="http://www.imco.org.mx/imco/recursos/webestados/home.html">http://www.imco.org.mx/imco/recursos/webestados/home.html</a>, as of September 15, 2011.

### Component 4C Trustworthiness and Agility of Public Property Registry

Consejo Coordinador Financiero (2011). *Indicadores de Confiabilidad y Desarrollo Institucional Local*. <a href="http://www.abm.org.mx/temas\_actualidad/estado">http://www.abm.org.mx/temas\_actualidad/estado</a>. htm>, as of August 16, 2011.

### Component 4D Corruption

Transparencia Mexicana (2010). *Indice Nacional de Corrupcion y Buen Gobierno 2010.* <a href="http://www.transparenciamexicana.org.mx/ENCBG/">http://www.transparenciamexicana.org.mx/ENCBG/</a>, as of September 8, 2012.

### **Additional Data Sources Used in Regression Analysis**

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